CHAPTER 6

The Organization and Costs of Production

Chapter 6 The organization and costs of production

1. A firm is a:
   A) Physical establishment which contributes to the production of goods and services
   B) Business organization which owns and operate plants
   C) Business organization which owns one plant
   D) Physical establishment which is owned by one person

   Ans: B Level: Easy Main Topic: 6.1 The firm and the business sector
   Page: 135 Subtopic: Legal forms of business Type: Definition

2. The three basic legal forms of business are the:
   A) Vertically integrated, horizontally integrated and conglomerate
   B) Horizontally and vertically integrated and corporation
   C) Sole proprietorship, the partnership and the corporation
   D) Partnership, corporation and conglomerate

   Ans: C Level: Easy Main Topic: 6.1 The firm and the business sector
   Page: 135 Subtopic: Legal forms of business Type: Definition

3. The advantage of sole proprietorship over partnership is that:
   A) it is easier to finance a business where there is only one owner.
   B) a greater specialization in the management level is possible.
   C) there is a limited liability in the sole proprietorship form of business while there is unlimited liability in case of partnership.
   D) the sole proprietor has substantial freedom of action.

   Ans: D Level: Easy Main Topic: 6.1 The firm and the business sector
   Page: 135 Subtopic: Advantages of corporations Type: Application

4. The corporation is the most effective form of business organization because the corporation has:
   A) easier access to financial capital through selling bonds and stocks.
   B) an unlimited liability toward the stock owners.
   C) more freedom of action with respect to management.
   D) the problem of double taxation with respect to the corporate income.

   Ans: A Level: Easy Main Topic: 6.1 The firm and the business sector
   Page: 135 Subtopic: Advantages of corporations Type: Application

5. The principal-agent problem arises because:
   A) the agent wants to maximize the company's profit and stock prices while the owners want power and prestige.
   B) the owners want to maximize company's profit and stock prices while the agent wants power and prestige.
   C) the owners want expensive office building while the agent wants to maximize the Company's profit.
   D) The stock holders have unlimited liability in case of a loss while the agent does not.

   Ans: B Level: Easy Main Topic: 6.1 The firm and the business sector
   Page: 136 Subtopic: The principal-agent problem Type: Application

6. The principal-agent problem is:
   A) a conflict of interest that occurs when agents pursue their own objectives to the detriment of the principals.
   B) a conflict of interest that occurs when principals pursue their own objectives to the detriment of the agent.
   C) a conflict between the agent and principals with respect to the unlimited liability.
   D) a conflict between the agent and principals with respect to the location of company.

   Ans: A Level: Easy Main Topic: 6.1 The firm and the business sector
   Page: 136 Subtopic: The principal-agent problem Type: Definition

7. For an economy depicted in the table below, the opportunity cost of moving from combination A to combination B is:

Combination	Unit of capital products	Unit of consumer products
A	16	0
B	12	16
C	8	28
D	4	36
E	0	40

   A) 1 unit of capital product for each unit of consumer product.
   B) $^1/_2$ unit of capital product for each unit of consumer product.
   C) $^3/_4$ unit of capital product for each unit of consumer product.
   D) $^1/_4$ unit of capital product for each unit of consumer product.

   Ans: D Level: Moderate Main Topic: 6.2 Economic costs
   Page: 137 Subtopic: Explicit and implicit costs Type: Calculation

8. Economic cost can best be defined as:
   A) any contractual obligation which results in a flow of money expenditures from an enterprise to factor of production suppliers.
   B) any contractual obligation to labour or material suppliers.
   C) compensations which must be received by factor of production owners to insure their continued supply.
   D) all costs exclusive of payments to fixed factors of production.

   Ans: C Level: Easy Main Topic: 6.2 Economic costs
   Page: 137 Subtopic: Explicit and implicit costs Type: Definition

9. Costs to an economist:
   A) consist only of explicit costs.
   B) may or may not involve monetary outlays.
   C) never reflect monetary outlays.
   D) always reflect monetary outlays.

   Ans: B Level: Easy Main Topic: 6.2 Economic costs
   Page: 137 Subtopic: Explicit and implicit costs Type: Application

10. Suppose that you could prepare your own tax return in 15 hours, or you could hire a tax specialist to prepare it for you in 2 hours. You value your time at $11.00 an hour. The tax specialist will charge you $55 an hour. The opportunity cost of preparing your own tax return is:
    A) $40.
    B) $55.
    C) $110.
    D) $165.

    Ans: D Level: Easy Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Calculation

11. An explicit cost is:
    A) omitted when accounting profits are calculated.
    B) a money payment made for factors of production not owned by the firm itself.
    C) an implicit cost to the factor of production owner who receives that payment.
    D) always in excess of a factor of production's opportunity cost.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Definition

12. Jon Brooks quit his job in a bicycle shop, where he earned $15,000 per year, to become a graduate student in economics. At the university he attended, he spent $2,000 on books, $1,000 on cough medicine, and earned $12,000 as an economics instructor per year. What were Jon's economic costs for a year while attending college?
    A) $18,000
    B) $15,000
    C) $6,000
    D) $3,000

    Ans: C Level: Moderate Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Application

13. Implicit and explicit costs are different in that:
    A) explicit costs are relevant only in the short run.
    B) implicit costs are relevant only in the short run.
    C) the latter refer to non-expenditure costs and the former to out-of-pocket costs.
    D) the former refer to non-expenditure costs and the latter to out-of-pocket costs.

    Ans: D Level: Moderate Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Definition

14. Implicit costs are:
    A) regarded as costs by accountants but not by economists.
    B) payments which a firm makes to other firms or individuals who supply factors of production to it.
    C) non-expenditure costs.
    D) costs which vary proportionately with output.

    Ans: C Level: Easy Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Definition

15. Which of the following is most likely to be an implicit cost for Company X?
    A) depreciation charges on company-owned equipment.
    B) rental payments on Nortel equipment.
    C) payments for raw materials purchased from Company Y.
    D) transportation costs paid to a nearby trucking concern.

    Ans: A Level: Easy Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Application

16. What do wages paid to workers, interest paid on a bank loan, forgone interest, and the purchase of component parts have in common?
    A) none are either implicit or explicit costs.
    B) all are opportunity costs.
    C) all are implicit costs.
    D) all are explicit costs.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Application

    Use the following to answer questions 17-22:

    Harvey quit his job where he earned $45,000 a year. He figures his entrepreneurial talent or foregone entrepreneurial income to be $5,000 a year. To start the business, he cashed in $100,000 in bonds that earned 10 percent interest annually to buy a software company, Extreme Gaming. In the first year, the firm sold 11,000 units of software at $75 for each unit. Of the $75 per unit, $55 goes for the costs of production, packaging, marketing, employee wages and benefits, and rent on a building.

17. Refer to the information provided. The explicit costs of the firm in the first year were:
    A) $150,000.
    B) $605,000.
    C) $665000.
    D) $825,000.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Calculation

18. Refer to the information provided. The implicit costs of the firm in the first year were:
    A) $50,000.
    B) $60,000.
    C) $100,000.
    D) $150,000.

    Ans: B Level: Moderate Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Calculation

19. Refer to the information provided. The accounting profit in the first year was:
    A) $50,000.
    B) $70,000.
    C) $150,000.
    D) $220,000.

    Ans: D Level: Easy Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Calculation

20. Refer to the information provided. The total revenues for the firm in the first year were:
    A) $50,000.
    B) $100,000.
    C) $605,000.
    D) $825,000.

    Ans: D Level: Easy Main Topic: 6.2 Economic costs
    Page: 137 Subtopic: Explicit and implicit costs Type: Calculation

21. Refer to the information provided. The total economic costs (explicit and implicit, including a normal profit) in the first year were:
    A) $60,000.
    B) $150,000.
    C) $665,000.
    D) $825,000.

    Ans: C Level: Moderate Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Normal profit as a cost Type: Calculation

22. Refer to the information provided. The normal profit in the first year was:
    A) $5,000.
    B) $10,000.
    C) $45,000.
    D) $60,000.

    Ans: A Level: Moderate Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Normal profit as a cost Type: Calculation

23. To the economist total cost includes:
    A) explicit and implicit costs, including a normal profit.
    B) neither implicit nor explicit costs.
    C) implicit, but not explicit, costs.
    D) explicit, but not implicit, costs.

    Ans: A Level: Easy Main Topic: 6.2 Economic costs
    Page: 138 Subtopic: Normal profit as a cost Type: Application

24. Accounting profits are typically:
    A) greater than economic profits because the former do not take explicit costs into account.
    B) equal to economic profits because accounting costs include all opportunity costs.
    C) smaller than economic profits because the former do not take implicit costs into account.
    D) greater than economic profits because the former do not take implicit costs into account.

    Ans: D Level: Easy Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Normal profit as a cost Type: Application

25. Normal profit is:
    A) determined by subtracting implicit costs from total revenue.
    B) determined by subtracting explicit costs from total revenue.
    C) payments that must be made by a firm to obtain and retain entrepreneurial ability.
    D) the average profitability of an industry over the preceding 10 years.

    Ans: C Level: Moderate Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Normal profit as a cost Type: Definition

26. Normal profits are:
    A) the profits reported by accountants on a firm's annual financial statement.
    B) identical to economic profits.
    C) determined by subtracting total costs from total revenues.
    D) considered an implicit cost by economists.

    Ans: D Level: Easy Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Normal profit as a cost Type: Application

27. Suppose that a business incurred implicit costs of $200,000 and explicit costs of $1 million in a specific year. If the firm sold 4,000 units of its output at $300 per unit, its accounting profits were:
    A) $100,000 and its economic profits were zero.
    B) $200,000 and its economic profits were zero.
    C) $100,000 and its economic profits were $100,000.
    D) zero and its economic loss was $200,000.

    Ans: B Level: Moderate Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Calculation

28. Suppose that a business incurred implicit costs of $500,000 and explicit costs of $5 million in a specific year. If the firm sold 100,000 units of its output at $50 per unit, its accounting:
    A) profits were $100,000 and its economic profits were zero.
    B) losses were $500,000 and its economic losses were zero.
    C) profits were $500,000 and its economic profits were $1 million.
    D) profit were zero and, its economic losses were $500,000.

    Ans: D Level: Moderate Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Calculation

29. Suppose that a firm produces 200,000 units a year and sells them all for $10 each. The explicit costs of production are $1,500,000 and the implicit costs of production are $300,000. The firm has an accounting profit of:
    A) $500,000 and an economic profit of $200,000.
    B) $400,000 and an economic profit of $200,000.
    C) $300,000 and an economic profit of $400,000.
    D) $200,000 and an economic profit of $500,000.

    Ans: A Level: Moderate Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Calculation

30. If a firm's revenues just cover all its opportunity costs, then:
    A) normal profit is zero.
    B) economic profit is zero.
    C) total revenues equal its explicit costs.
    D) total revenues equal its implicit costs.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Application

31. Which of the following definitions is correct?
    A) Accounting profit + economic profit = normal profit.
    B) Economic profit - accounting profit = explicit costs.
    C) Economic profit = accounting profit - implicit costs.
    D) Economic profit - implicit costs = accounting profits.

    Ans: C Level: Moderate Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Definition

32. Economic profits are calculated by subtracting:
    A) explicit costs from total revenue.
    B) implicit costs from total revenue.
    C) implicit costs from normal profits.
    D) explicit and implicit costs from total revenue.

    Ans: D Level: Easy Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Application

33. Economic profit is:
    A) total revenues minus fixed costs.
    B) total revenues from sales minus the cost of materials.
    C) total revenues minus the opportunity cost of the inputs.
    D) gross profit minus selling and operating expenses.

    Ans: C Level: Easy Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Definition

34. Economic profit for a company is defined as the total revenues of the firm minus the:
    A) opportunity cost of all factors of production.
    B) explicit costs of production.
    C) implicit cost of production.
    D) accounting profit.

    Ans: A Level: Easy Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Definition

35. An industry is expected to expand if firms in the industry are earning:
    A) normal profits.
    B) economic profits.
    C) accounting profits.
    D) profits that exactly cover all of the firms' opportunity costs.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Application

36. Suppose a firm sells its product at a price lower than the opportunity cost of the inputs used to produce it. Which of the following is true?
    A) The firm will earn accounting and economic profits.
    B) The firm will face accounting and economic losses.
    C) The firm will face an accounting loss, but earn economic profits.
    D) The firm may earn accounting profits, but will face economic losses.

    Ans: D Level: Moderate Main Topic: 6.2 Economic costs Page: 138
    Subtopic: Economic profit (or pure profit) Type: Application

Use the following to answer questions 37-38:

Harvey quit his job where he earned $45,000 a year. He figures his entrepreneurial talent or foregone entrepreneurial income to be $5,000 a year. To start the business, he cashed in $100,000 in bonds that earned 10 percent interest annually to buy a software company, Extreme Gaming. In the first year, the firm sold 11,000 units of software at $75 for each unit. Of the $75 per unit, $55 goes for the costs of production, packaging, marketing, employee wages and benefits, and rent on a building.

37. Refer to the information provided. The economic profit in the first year was:
A) $50,000.
B) $70,000.
C) $160,000.
D) $220,000.

Ans: C Level: Moderate Main Topic: 6.2 Economic costs Page: 138
Subtopic: Economic profit (or pure profit) Type: Calculation

38. Refer to the information provided. If the price of the product rose to $85, then the economic profit will be:
A) $60,000.
B) $220,000.
C) $270,000.
D) $330,000.

Ans: C Level: Moderate Main Topic: 6.2 Economic costs Page: 138
Subtopic: Economic profit (or pure profit) Type: Calculation

39. In the short run:
A) a firm cannot vary its output.
B) all factors of production can be varied.
C) a firm can change its fixed inputs.
D) output can be changed by using different levels of variable inputs.

Ans: D Level: Easy Main Topic: 6.2 Economic costs Page: 138
Subtopic: Short run and long run Type: Application

40. The short run is a time period in which:
A) all factors of production are fixed.
B) the level of output is fixed.
C) the size of the production plant is variable.
D) some factors of production are fixed and others are variable.

Ans: D Level: Easy Main Topic: 6.2 Economic costs Page: 138-139
Subtopic: Short run and long run Type: Definition

41. The short run is a period in which:
    A) there are economies of scale.
    B) there are diseconomies of scale.
    C) the plant capacity for a firm is fixed.
    D) the plant capacity for a firm is variable.

    Ans: C Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

42. In the short run, output:
    A) is absolutely fixed.
    B) can vary as the result of using a fixed amount of plant and equipment more or less intensively.
    C) may be altered by varying the size of plant and equipment which now exist in the industry.
    D) can vary as the result of changing the size of existing plants and by new firms entering or leaving the industry.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

43. Which of the following is a short-run adjustment?
    A) A local bakery hires two additional bakers.
    B) Six new firms enter the plastics industry.
    C) The number of farms in Canada declines by 5 percent.
    D) Chevrolet constructs a new assembly plant in Oshawa.

    Ans: A Level: Moderate Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

44. The short run is characterized by:
    A) plenty of time for firms to either enter or leave the industry.
    B) increasing, but not diminishing returns.
    C) at least one fixed factor of production.
    D) zero fixed costs.

    Ans: C Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

45. The basic characteristic of the short run is that:
    A) barriers to entry prevent new firms from entering the industry.
    B) the firm does not have sufficient time to change the size of its plant.
    C) the firm does not have sufficient time to cut its rate of output to zero.
    D) a firm does not have sufficient time to change the amounts of any of the factors of production it employs.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

46. To economists the main difference between "the short run" and "the long run" is that:
    A) the law of diminishing returns applies in the long run, but not in the short run.
    B) in the long run all factors of production are variable, while in the short run at least one factor of production is fixed.
    C) fixed costs are more important to decision making in the long run than they are in the short run.
    D) in the short run all factors of production are fixed, while in the long run all factors of production are variable.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Definition

47. The basic difference between the "short run" and the "long run" is that:
    A) all costs are fixed in the short run, but all costs are variable in the long run.
    B) the law of diminishing returns applies in the long run, but not in the short run.
    C) at least one factor of production is fixed in the short run, while all factors of production are variable in the long run.
    D) economies of scale may be present in the short run, but not in the long run.

    Ans: C Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

48. The amount of calendar time associated with the long run:
    A) is less than that associated with the immediate market period.
    B) varies from industry to industry.
    C) is the same for all firms.
    D) is one year by definition.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

49. Which statement is correct?
    A) In the short run the plant capacity is variable.
    B) In the long run the plant capacity is variable.
    C) In the long run the plant capacity is fixed.
    D) In the short run, all factors of production are variable.

    Ans: B Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

50. The long run is a period of time for which:
    A) all factors of production are fixed.
    B) the level of output is fixed.
    C) the amount of all factors of production can be varied.
    D) the sized of the production plant is fixed.

    Ans: C Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Definition

51. Which of the following represents a long-run adjustment?
    A) a farmer uses an extra dose of fertilizer on his corn crop.
    B) unable to meet foreign competition, a Canadian watch manufacturer sells one of its branch plants.
    C) a steel manufacturer cuts back on its purchases of coke and iron ore.
    D) a supermarket hires four additional clerks.

    Ans: B Level: Moderate Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

52. The long run is characterized by:
    A) the relevance of the law of diminishing returns.
    B) at least one fixed input.
    C) insufficient time for firms to enter or leave the industry.
    D) the ability of the firm to change its plant size.

    Ans: D Level: Easy Main Topic: 6.2 Economic costs Page: 139
    Subtopic: Short run and long run Type: Application

53. The graph of a total product curve shows the:
    A) minimum level of output that can be produced by a quantity of a variable factor of production holding constant the quantity of other factors of production.
    B) minimum level of output that can be produced by a quantity of a fixed factor of production letting other factors of production vary.
    C) maximum level of output that can be produced by a quantity of a fixed factor of production letting other factors of production vary.
    D) maximum level of output that can be produced by a quantity of a variable factor of production holding constant the quantity of other factors of production.

    Ans: D Level: Moderate Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Total, marginal, and average product Type: Definition

54. Marginal product is:
    A) the increase in total output attributable to the employment of one more worker.
    B) the increase in total revenue attributable to the employment of one more worker.
    C) the increase in total cost attributable to the employment of one more worker.
    D) total product divided by the number of workers employed.

    Ans: A Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Total, marginal, and average product Type: Definition

55. Marginal product:
    A) diminishes at all levels of production.
    B) may initially increase, then diminish, but never become negative.
    C) may initially increase, then diminish, and ultimately become negative.
    D) is always less than average product.

    Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Total, marginal, and average product Type: Application

56. The marginal product of labour curve shows the change in total product resulting from a:
    A) One-unit increase in the quantity of a particular factor of production used, letting other factors of production vary.
    B) One-unit increase in the quantity of a particular factor of production used, holding constant other factors of production.
    C) change in the cost of a variable factor of production.
    D) change in the cost of a fixed factor of production.

    Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Total, marginal, and average product Type: Definition

57. The marginal product of a factor of production is measured by:
    A) workers employed.
    B) production cost.
    C) output produced.
    D) capital employed.

    Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Total, marginal, and average product Type: Definition

    Use the following to answer questions 58-59:

    Output data for a firm. Assume that the amounts of all non-labour factors of production are fixed.

Number of workers	Units of output
0	0
1	40
2	90
3	126
4	150
5	165
6	180

58. Refer to the data above. The marginal product of the sixth worker:
    A) is 180 units of output.
    B) is 30 units of output.
    C) is 15 units of output.
    D) is negative.

    Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Total, marginal, and average product Type: Calculation

59. Refer to the data above. Average product is at a maximum when:
    A) five workers are hired.
    B) four workers are hired.
    C) three workers are hired.
    D) two workers are hired.

    Ans: D Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Total, marginal, and average product Type: Calculation

Use the following to answer questions 60-63:

Assume that the only variable factor of production used to produce output is labour.

Amount of Labour	Total Product
1	6
2	16
3	24
4	30
5	34
6	36

60. Refer to the table above. The marginal product of the fourth unit of labour is:
A) 4 units of output.
B) 6 units of output.
C) 8 units of output.
D) 30 units of output.

Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 140 Subtopic: Total, marginal, and average product Type: Calculation

61. Refer to the table above. When the firm hires four units of labour the average product of labour is:
A) 5 units of output.
B) 6.50 units of output.
C) 8.50 units of output.
D) 30 units of output.

Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 140 Subtopic: Total, marginal, and average product Type: Calculation

62. Refer to the table above. There are increasing marginal returns through the:
A) first unit of labour.
B) second unit of labour.
C) third unit of labour.
D) fourth unit of labour.

Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 140 Subtopic: Total, marginal, and average product Type: Calculation

63. Refer to the table above. Diminishing marginal returns set in with the addition of the:
    A) first unit of labour.
    B) second unit of labour.
    C) third unit of labour.
    D) fourth unit of labour.

    Ans: C Level: Moderate Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Calculation

64. The law of diminishing returns indicates that:
    A) as extra units of a variable factor of production are added to a fixed factor of production, marginal product will decline beyond some point.
    B) because of economies and diseconomies of scale a competitive firm's long-run average total cost curve will be U-shaped.
    C) the demand for goods produced by purely competitive industries is downward sloping.
    D) beyond some point the extra utility derived from additional units of a product will yield the consumer smaller and smaller extra amounts of satisfaction.

    Ans: A Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Definition

65. The law of diminishing returns implies:
    A) the more hours you spend studying the less you will know.
    B) your understanding will be increased by decreasing your marginal study time.
    C) eventually, the more hours you spend studying per day, the less you will learn with each added hour.
    D) the more hours you spend studying per day, the more you will learn with each added hour.

    Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Application

66. Which of the following best expresses the law of diminishing returns?
    A) Because large-scale production allows the realization of economies of scale, the real costs of production vary directly with the level of output.
    B) Population growth automatically adjusts to that level at which the average product per worker will be at a maximum.
    C) As successive amounts of one factor of production (labour) are added to fixed amounts of other factors of production (property), beyond some point the resulting extra output will decline.
    D) Proportionate increases in the inputs of all factors of production will result in a less-than-proportionate increase in total output.

    Ans: C Level: Moderate Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Definition

67. Diminishing returns are observed as a firm increases production by adding variable inputs to at least one fixed input because:
    A) the ability or quality of the variable inputs hired decreases as more are hired.
    B) the firm must lower the price of its product when it produces more units of output.
    C) the per unit cost it must pay for variable inputs increases as more inputs are hired.
    D) as more variable inputs are hired, the amount of the fixed input per variable input they have to work with decreases.

    Ans: D Level: Moderate Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Application

68. "If a variable input is added to some fixed input, beyond some point the resulting extra output will decline." This statement describes:
    A) economies and diseconomies of scale.
    B) X-inefficiency.
    C) the law of diminishing returns.
    D) the law of diminishing marginal utility.

    Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Definition

69. The law of diminishing returns results in:
    A) an eventually rising marginal product curve.
    B) a total product curve which eventually increases at a decreasing rate.
    C) an eventually falling marginal cost curve.
    D) a total product curve which rises indefinitely.

    Ans: B Level: Moderate Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Application

70. The law of diminishing returns describes the:
    A) relationship between total costs and total revenues.
    B) profit-maximizing position of a firm.
    C) relationship between factor of production inputs and product outputs in the short run.
    D) relationship between factor of production inputs and product outputs in the long run.

    Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Definition

71. Which statement best illustrates the law of diminishing returns?
    A) The average total cost of the last unit of a factor of production used is less than the average total cost of the previous factor of production used.
    B) The marginal product of the last unit of a factor of production used is less than the marginal product of the previous factor of production used.
    C) The average product of the last unit of a factor of production used is less than the average product of the previous factor of production used.
    D) The marginal cost of the last unit of a factor of production used is less than the marginal cost of the previous factor of production used.

    Ans: B Level: Moderate Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Definition

72. Which statement is true?
    A) Diminishing returns set in after marginal product intersects average product.
    B) Underlying the law of diminishing returns is the assumption that at least one input remains fixed.
    C) The law of diminishing marginal returns implies that there will never be increasing returns to scale.
    D) Given a total product curve for labour, Q = 5 L, labour is only subject to diminishing marginal returns after L = 5.

    Ans: B Level: Moderate Main Topic: 6.3 Short-run production relationships
    Page: 140 Subtopic: Law of diminishing returns Type: Definition

73. The law of diminishing returns explains:
    A) why there are diseconomies of scale.
    B) the increases in short-run marginal costs.
    C) increases in wage rates as labour becomes more scarce.
    D) the decline in average fixed cost as more output is produced.

    Ans: B Level: Difficult Main Topic: 6.3 Short-run production relationships
    Page: 141 Type: Application

Use the following to answer question 74:

Refer to the following output data for a firm. Assume that the amounts of all non-labour factors of production are fixed.

Number ofworkers	Units of output
0	0
1	40
2	90
3	126
4	150
5	165
6	180

74. Refer to the table above. Diminishing marginal returns become evident with the addition of:
A) the sixth worker.
B) the fourth worker.
C) the third worker.
D) the second worker.

Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 141 Subtopic: Law of diminishing returns Type: Calculation

75. The first, second, and third workers employed by a firm add 24, 18, and 9 units to total product respectively. We can conclude that:
A) the marginal product of the third worker is 9.
B) the total product of the three workers is 54.
C) the average product of the three workers is 18.
D) the marginal product of the second worker is 18.

Ans: A Level: Moderate Main Topic: 6.3 Short-run production relationships
Page: 141 Subtopic: Law of diminishing returns Type: Calculation

Use the following to answer questions 76-77:

Number of workers	Total product	Marginal product
0	0	--
1	8	8
2		10
3	25	
4	30	
5		3
6	34	

76. Refer to the data above. When two workers are employed:
A) total product is 20.
B) total product is 18.
C) average product is 10.
D) total product cannot be determined from the information given.

Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 141- 142 Subtopic: Law of diminishing returns Type: Calculation

77. Refer to the data above. The marginal product of the fourth worker:
A) is 5
B) is 7.
C) is $7^1/_2$.
D) cannot be calculated from the information given.

Ans: A Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 141- 142 Subtopic: Law of diminishing returns Type: Calculation

Use the following to answer questions 78-82:

The following table provides information on the production of a product that requires one variable input.

Input	Totalproduct
0	0
1	5
2	20
3	32
4	42
5	50
6	55
7	58
8	58
9	56

78. Refer to the table above. There are increasing marginal returns through the:
A) first unit of variable input.
B) second unit of variable input.
C) third unit of variable input.
D) fourth unit of variable input.

Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 141- 142 Subtopic: Law of diminishing returns Type: Calculation

79. Refer to the table above. Diminishing returns set in with the addition of the:
A) first unit of input.
B) second unit of input.
C) third unit of input.
D) fourth unit of input.

Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 141- 142 Subtopic: Law of diminishing returns Type: Calculation

80. Refer to the table above. There are negative marginal returns when the:
A) fifth unit of input is added.
B) sixth unit of input is added.
C) seventh unit of input is added.
D) ninth unit of input is added.

Ans: D Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 141- 142 Subtopic: Law of diminishing returns Type: Calculation

81. Refer to the table above. With the addition of the first unit of input, the marginal product is:
A) 5 and the average product is 8.4.
B) 5 and the average product is 5.0.
C) 8 and the average product is 8.4.
D) 8 and the average product is 10.0.

Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 141- 142 Subtopic: Law of diminishing returns Type: Calculation

82. Refer to the table above. When the marginal product is zero, then total product is:
A) 50.
B) 55.
C) 56.
D) 58.

Ans: D Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 141- 142 Subtopic: Law of diminishing returns Type: Calculation

Use the following to answer questions 83-85:

Inputs of labour	Total product
0	0
1	8
2	18
3	25
4	30
5	33
6	34
7	32

83. Refer to the data above. When total product is increasing at an increasing rate, marginal product is:
A) positive and increasing.
B) positive and decreasing.
C) constant.
D) negative.

Ans: A Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 142-143 Subtopic: Law of diminishing returns Type: Calculation

84. Refer to the data above. When total product is increasing at a decreasing rate, marginal product is:
    A) positive and increasing.
    B) positive and decreasing.
    C) constant.
    D) negative.

    Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Calculation

85. Refer to the data above. When total product is diminishing, marginal product is:
    A) positive and increasing.
    B) positive and decreasing.
    C) constant.
    D) negative.

    Ans: D Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Calculation

86. Which of the following statements concerning the relationships between total product (TP), average product (AP), and marginal product (MP) is not correct?
    A) AP continues to rise so long as TP is rising.
    B) AP reaches a maximum before TP reaches a maximum.
    C) TP reaches a maximum when the MP of the variable input becomes zero.
    D) MP cuts AP at the maximum AP.

    Ans: A Level: Difficult Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

87. If in the short run a firm's total product is increasing, then its:
    A) marginal product must also be increasing.
    B) marginal product must be decreasing.
    C) marginal product could be either increasing or decreasing.
    D) average product must also be increasing.

    Ans: C Level: Moderate Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

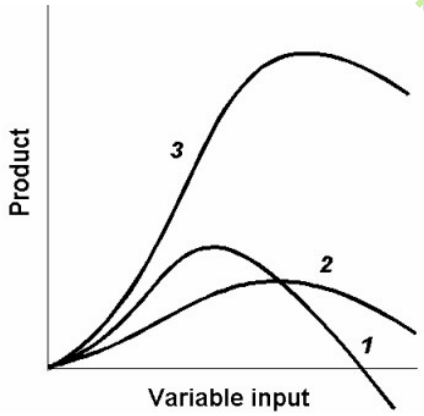
88. Which of the following is correct?
    A) When total product is rising, both average product and marginal product must also be rising.
    B) When marginal product is falling, total product must be falling.
    C) When marginal product is falling, average product must also be falling.
    D) Marginal product rises faster than average product and also falls faster than average product.

    Ans: D Level: Difficult Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

89. Which of the following is not correct?
    A) Where marginal product is greater than average product, average product is rising.
    B) Where total product is at a maximum, average product is also at a maximum.
    C) Where marginal product is zero, total product is at a maximum.
    D) Marginal product becomes negative before average product becomes negative.

    Ans: B Level: Difficult Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

    Use the following to answer questions 90-91:



90. In the diagram above, curves 1, 2, and 3 represent the:
    A) average, marginal, and total product curves respectively.
    B) marginal, average, and total product curves respectively.
    C) total, average, and marginal product curves respectively.
    D) total, marginal, and average product curves respectively.

    Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

91. The diagram above suggests that:
    A) when marginal product is zero, total product is at a maximum.
    B) when marginal product lies above average product, average product is rising.
    C) when marginal product lies below average product, average product is falling.
    D) all of the above hold true.

    Ans: D Level: Difficult Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

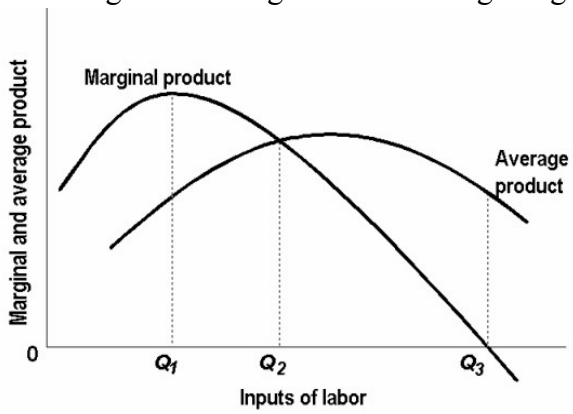
92. The total output of a firm will be at a maximum where:
    A) MP is at a maximum.
    B) AP is at a minimum.
    C) MP is zero.
    D) AP is at a maximum.

    Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

93. In the short run, total product begins to decrease at the point where the:
    A) average product of labour is zero.
    B) marginal product of labour is zero.
    C) average product of labour is negative.
    D) average product of labour is declining.

    Ans: B Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

94. In the diagram the range of diminishing marginal returns is:



    A) $0Q_3$.
    B) $0Q_2$.
    C) Q_1Q_2.
    D) Q_1Q_3.

    Ans: D Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

95. When the total product curve is falling, the:
    A) marginal product of labour is zero.
    B) marginal product of labour is negative.
    C) average product of labour is increasing.
    D) average product of labour must be negative.

    Ans: B Level: Moderate Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

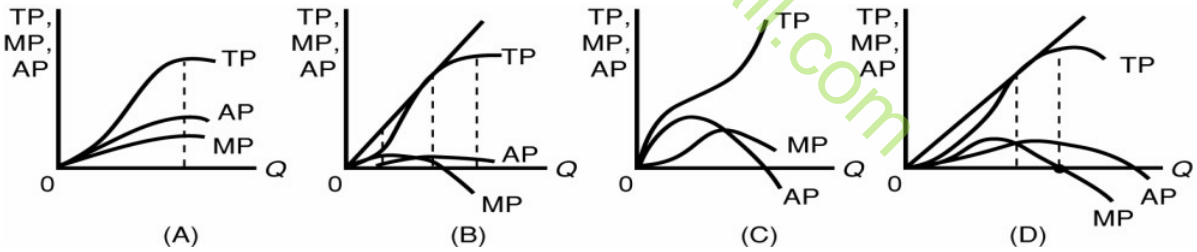
96. The range of diminishing marginal productivity begins when:
    A) total product begins to fall.
    B) average product reaches its maximum.
    C) marginal product reaches its maximum.
    D) marginal product begins to fall at an increasing rate.

    Ans: C Level: Easy Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

97. When marginal product reaches its maximum, what can be said of total product?
    A) total product must be at its maximum
    B) total product starts to decline even if marginal product is positive
    C) total product is increasing if marginal product is still positive
    D) total product levels off

    Ans: C Level: Difficult Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Application

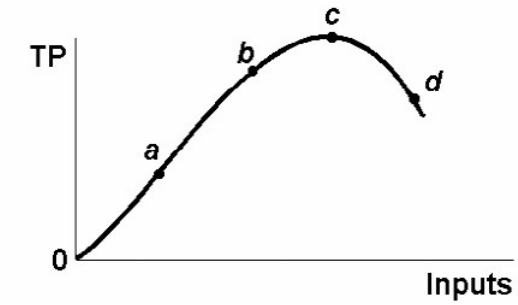
98. Which of the graphs below properly depicts the relationships TP, AP, and MP?



    A) graph A
    B) graph B
    C) graph C
    D) graph D

    Ans: D Level: Difficult Main Topic: 6.3 Short-run production relationships
    Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

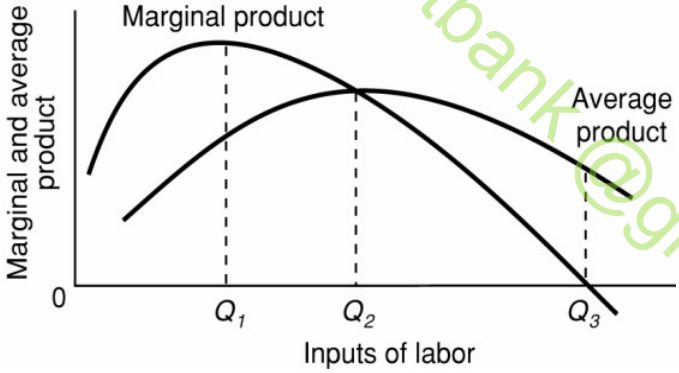
99. At which point is marginal product smallest?



A) point a
B) point b
C) point c
D) point d

Ans: D Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

100. Refer to the diagram. Where variable inputs of labour are being added to a constant amount of property factors of production. The total output of this firm will cease to expand:



A) if a labour force in excess of Q_1 is employed.
B) if a labour force in excess of Q_2 is employed.
C) if a labour force in excess of Q_3 is employed.
D) only if the marginal product curve becomes negative at all levels of output.

Ans: C Level: Moderate Main Topic: 6.3 Short-run production relationships
Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

101. At what point does marginal product equal average product?
A) where average product is equal to its minimum value
B) where average product is equal to its maximum value
C) where marginal product is equal to its minimum value
D) where marginal product is equal to its maximum value

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

102. Where there are diminishing marginal returns to a variable factor of production the:
A) average product curve approaches the marginal product curve from above.
B) average product curve approaches the total product curve from below.
C) marginal product curve approaches the average product curve from below.
D) marginal product curve approaches the average product curve from above.

Ans: D Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 142-143 Subtopic: Law of diminishing returns Type: Graphic

103. Fixed cost is:
A) the cost of producing one more unit of capital, say, machinery.
B) any cost which does not change when the firm changes its output.
C) average cost multiplied by the firm's output.
D) usually zero in the short run

Ans: B Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Definition

104. A fixed cost is:
A) associated with any productive factor of production whose price is fixed.
B) any cost which increases proportionately with output.
C) any cost which a firm would incur even if output was zero.
D) associated with all inputs whose short-run supply is perfectly inelastic.

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Definition

105. Which of the following is most likely to be a fixed cost?
A) shipping charges
B) property insurance premiums
C) wages for unskilled labour
D) expenditures for raw materials

Ans: B Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Application

106. If you owned a small farm, which of the following would be a fixed cost?
A) harvest labour
B) hail insurance
C) fertilizer
D) seed

Ans: B Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Application

107. Which of the following is the best example of a fixed cost of production to a firm?
A) depreciation of capital
B) wages paid to workers
C) electricity charges
D) advertising

Ans: A Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Application

108. The level of fixed costs of production for a firm:
A) cannot increase in the short run.
B) is a function of the level of variable costs.
C) is low in proportion to variable costs in the short run.
D) is independent of the level of output in the short run.

Ans: D Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Application

109. If a firm decides to produce no output in the short run, its costs will be:
A) its marginal costs.
B) its fixed plus its variable costs.
C) its fixed costs.
D) zero.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Application

110. If you know that when a firm produces 10 units of output, total costs are $1,030 and average fixed costs are $10, then total fixed costs are:
A) $5.
B) $100.
C) $1,020.
D) $1,040.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Calculation

111. Total fixed cost (TFC):
A) falls as the firm expands output from zero, but eventually rises.
B) falls continuously as total output expands.
C) varies directly with total output.
D) does not change as total output increases or decreases.

Ans: D Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Application

112. Fixed costs are associated with:
A) highly adjustable inputs such as labour.
B) both the short run and the long run.
C) the short run only.
D) the long run only.

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Application

113. Which is not a fixed cost?
A) monthly rent of $1,000 contractually specified in a one-year lease
B) an insurance premium of $50 per year, paid last month
C) an attorney's retainer of $50,000 per year
D) a worker's wage of $15 per hour

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Application

114. Assume that in the short run a firm is producing 100 units of output, has average total costs of $200, and average variable costs of $150. The firm's total fixed costs are:
A) $5,000.
B) $500.
C) $.50.
D) $50.

Ans: A Level: Moderate Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Calculation

115. Refer to the data. Total fixed cost is:

Output	Average fixed cost	Average variable cost
1	$50.00	$100.00
2	25.00	80.00
3	16.67	66.67
4	12.50	65.00
5	10.00	68.00
6	8.37	73.33
7	6.14	80.00
8	6.25	86.50

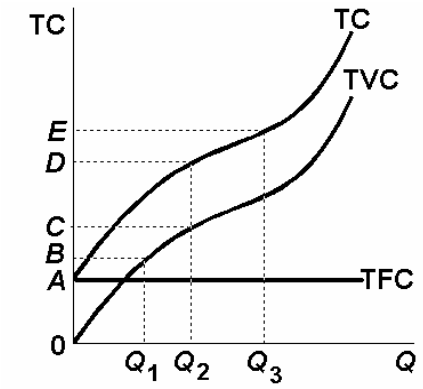
A) $6.25.
B) $100.00.
C) $150.00.
D) $50.00.

Ans: D Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Calculation

116. At an output level of 50 units per day a firm has average total costs of $60 and average variable costs of $35. Its total fixed costs are:
A) $925.
B) $1,250.
C) $1,750.
D) $3,000.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 144
Subtopic: Fixed, variable, and total costs Type: Calculation

117. Refer to the graph. Total fixed cost is measured by:



A) 0B.
B) AC.
C) CD.
D) DE.

Main Topic: 6.4 Short-run production costs Page: 144-145

Ans: C Level: Easy
Subtopic: Fixed, variable, and total costs Type: Graphic

118. Which of the following is incorrect?
A) Total fixed cost does not change with output in the short run.
B) Fixed costs exist only in the short run.
C) Total fixed cost must be added to total variable cost to determine total cost.
D) Total fixed cost equals total variable cost in the long run.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 144-145 Subtopic: Fixed, variable, and total costs Type: Application

119. Which of the following is most likely to be a variable cost?
A) fuel and power payments
B) interest on business loans.
C) rental payments on IBM equipment
D) real estate taxes

Ans: A Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

120. If you operated a small bakery, which of the following would be a variable cost in the short run?
A) baking ovens
B) interest on business loans
C) annual lease payment for use of the building
D) baking supplies (flour, salt, etc.)

Ans: D Level: Easy Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

121. A firm's total variable cost will depend on:
A) the prices of variable factors of production.
B) the production techniques which are used.
C) the level of output.
D) all of the above.

Ans: D Level: Easy Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

122. As output increases, total variable cost:
A) increases more rapidly than does total cost.
B) increases continuously at a decreasing rate.
C) increases at a decreasing rate and then at an increasing rate.
D) increases at a constant rate.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

123. In comparing the changes in TVC and TC associated with an additional unit of output, we find that:
A) no generalization about the changes in TC and TVC can be made.
B) the changes in TC and TVC are equal.
C) the change in TC is greater than the change in TVC.
D) the change in TVC is greater than the change in TC.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

124. Refer to the data. The total variable cost of producing 5 units:

Output	Total cost
0	$24
1	33
2	41
3	48
4	54
5	61
6	69

A) is $61.
B) is $48.
C) is $37.
D) is $24. Main Topic: 6.4 Short-run production costs Page: 145

Ans: C Level: Difficult
Subtopic: Fixed, variable, and total costs Type: Calculation

125. Total cost minus total variable cost equals:
A) average fixed cost.
B) total fixed cost.
C) average variable cost.
D) marginal cost.

Ans: B Level: Easy Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

126. In the short run:
A) TVC will increase for a time at a diminishing rate, but then beyond some point will increase at an increasing rate.
B) TVC will increase for a time at an increasing rate, but then beyond some point will increase at a diminishing rate.
C) TVC will increase by the same absolute amount for each additional unit of output produced.
D) one cannot generalize concerning the behaviour of TVC as output increases.

Ans: A Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Graphic

127. Refer to the data. The total cost of four units of output is:

Output	Average fixed cost fixed	Average variable cost
1	$50.00	$100.00
2	25.00	80.00
3	16.67	66.67
4	12.50	65.00
5	10.00	68.00
6	8.37	73.33
7	6.14	80.00
8	6.25	86.50

A) $260.
B) $76.50.
C) $215.
D) $310. Easy Main Topic: 6.4 Short-run production costs Page: 145

Ans: D Level:
Subtopic: Fixed, variable, and total costs Type: Calculation

128. If: TFC = Total Fixed Cost, MC = Marginal Cost, TVC = Total Variable Cost
Q = Quantity of Output, P = Product Price, the total cost is:
A) the change in marginal cost.
B) TVC - TFC
C) TFC + TVC
D) TFC+TVC/Q

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Formula

Use the following to answer questions 129-131:

Inputworkers	Output	TFC	TVC	Totalcost
0	0	50	0	
1	8	50	40	90
2	20	50	80	
3	28	50	120	170
4	35	50		210
5	41	50	200	250

129. Refer to the table above. If output is zero, total cost is:
A) $90.
B) $50.
C) $40.
D) $0. Main Topic: 6.4 Short-run production costs Page: 145

Ans: B Level: Easy
Subtopic: Fixed, variable, and total costs Type: Calculation

130. Refer to the table above. The total cost of producing 20 units of output is:
A) $50.
B) $80.
C) $120.
D) $130. Main Topic: 6.4 Short-run production costs Page: 145

Ans: D Level: Easy
Subtopic: Fixed, variable, and total costs Type: Calculation

131. Refer to the table above. The total variable cost of producing 35 units of output is:
A) $90.
B) $120.
C) $160.
D) $210.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Calculation

132. Refer to the table below. The total cost of five units of output will be:

Output	Total fixed cost	Total variable cost	Average variable cost
$ 0	$200	$ 0	
1	200	50	$50.00
2	200	90	45.00
3	200	120	4 0.00
4	200	160	40.00
5	200	220	44.00

A) $290.
B) $320.
C) $420.
D) $500.

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Calculation

133. Because the marginal product of a variable factor of production at first increases and then decreases as the output of the firm is increased:
A) total cost at first increases at a decreasing rate and then increases at an increasing rate.
B) total variable cost at first increases at an increasing rate and then increases at a decreasing rate.
C) average total cost at first increases and then diminishes.
D) average fixed cost will rise beyond the point of diminishing returns.

Ans: A Level: Difficult Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

134. Assume a firm closes down in the short run and produces no output. Under these conditions:
A) TVC is positive, but TFC and TC are zero.
B) TFC is positive, but TVC and TC are zero.
C) TFC and TC are positive, but TVC is zero.
D) TFC, TVC, and TC will all be positive.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

135. Refer to the data. If the firm decided to increase its output from 6 to 7 units, its total costs would rise by:

Output	Average fixed cost	Average variable cost
1	$50.00	$100.00
2	25.00	80.00
3	16.67	66.67
4	12.50	65.00
5	10.00	68.00
6	8.37	73.33
7	6.14	80.00
8	6.25	86.50

A) $86.14.
B) $80.00.
C) $6.67.
D) $120.00.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Calculation

136. Refer to the following information.

The Sunshine Corporation finds that its costs are $40 when it produces no output. Its total variable costs (TVC) change with output as shown in the accompanying table.

Output	TVC
1	$30
2	50
3	65
4	85
5	110

The total cost of producing 3 units of output:

A) is $65.
B) is $105.
C) is $145.
D) is $185.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Calculation

137. At an output of 1,000 units per year, a firm's variable costs are $5,000 and its average fixed costs are $3. Its total costs per year are:

A) $10,000.
B) $8,000.
C) $6,000.
D) $5,000.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Calculation

138. Refer to the data.
The accompanying table shows average total costs (ATC) for a manufacturing firm whose total fixed costs are $10:

Output	ATC
1	$40
2	27
3	29
4	31
5	38

The total cost of producing 4 units of output:
A) is $31.
B) is $87.
C) is $124.
D) is $108.

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Calculation

139. In the short run the Sure-Screen T-Shirt Company is producing 500 units of output. Its average variable costs are $2.00 and its average fixed costs are $.50. The firm's total costs:
A) are $2.50.
B) are $1250.
C) are $750.
D) are $1100.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Calculation

140. If you know that with 8 units of output, average fixed cost is $12.50 and average variable cost is $81.25, then total cost at this output level is:
A) $93.75.
B) $97.78.
C) $750.
D) $880.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

141. Suppose that, when producing 10 units of output, a firm's AVC is $22, its AFC is $5, and its MC is $30. This:
A) firm's ATC is $35.
B) firm's ATC is $57.
C) firm's total cost is $270.
D) firm's total cost is $30.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Calculation

142. Refer to the data.

Output	Average fixed cost	Average variable cost
1	$50.00	$100.00
2	25.00	80.00
3	16.67	66.67
4	12.50	65.00
5	10.00	68.00
6	8.37	73.33
7	6.14	80.00
8	6.25	86.50

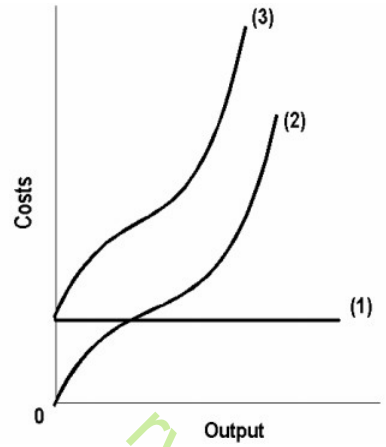
If the firm closed down and produced zero units of output, its total cost:
A) would be zero.
B) would be $50.
C) would be $150.
D) could not be calculated.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Calculation

143. In the short run which of the following statements is correct?
A) The marginal cost curve intersects the average variable and average fixed cost curves at their minimum points.
B) Average variable cost declines continuously as total output is expanded.
C) Total cost will always exceed variable cost.
D) If the inputs of all factors of production are increased by equal amounts, total output will expand by diminishing amounts.

Ans: C Level: Difficult Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

144. In the diagram curves 1, 2, and 3 represent:



A) average variable cost, marginal cost, and average fixed cost respectively.
B) total variable cost, total fixed cost, and total cost respectively.
C) total fixed cost, total variable cost, and total cost respectively.
D) marginal product, average variable cost, and average total cost respectively.

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Graphic

145. The vertical distance between the total cost and the total variable cost curves differs by an amount which:
A) initially increases, but then decreases, as output increases.
B) is constant as output changes.
C) decreases as output increases.
D) increases as output increases.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 145
Subtopic: Fixed, variable, and total costs Type: Application

146. Average fixed cost:
A) equals marginal cost when average total cost is at its minimum.
B) may be found for any output by adding average variable cost and average total cost.
C) graphs as a U-shaped curve.
D) declines continually as output increases.

Ans: D Level: Easy Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Application

147. When average fixed costs are falling:
A) average total cost must be falling.
B) average variable cost may be either rising or falling.
C) marginal cost must be falling.
D) average variable costs must be rising.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Application

148. Refer to the data.

Output	Total cost
0	$24
1	33
2	41
3	48
4	54
5	61
6	69

The average fixed cost of producing 3 units of output:
A) is $8.
B) is $6.40.
C) is $5.50.
D) is $6.

Ans: A Level: Difficult Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Calculation

149. Average fixed cost is:

Choice A equal to marginal cost.
Choice B $\frac{MC}{Q}$
Choice C $\frac{TFC}{Q}$
Choice D $\frac{TVC}{Q}$
A) Choice A
B) Choice B
C) Choice C
D) Choice D

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Formula

150. In the short run it is impossible for an expansion of output to increase:
A) average total cost.
B) average fixed cost.
C) marginal cost.
D) average variable cost.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Application

151. Average fixed costs can be determined graphically by:
A) summing the marginal costs of any number of units of output and dividing the sum by that output.
B) the vertical distance between TC and TVC.
C) the vertical distance between AVC and MC.
D) the vertical distance between ATC and AVC.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Application

152. The vertical distance between a firm's ATC and AVC curves represents:
A) AFC which increases as output increases.
B) AFC which decreases as output increases.
C) marginal costs which decrease as output decreases.
D) marginal costs which increase as output increases.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Application

153. If a profitable firm's fixed costs somehow was zero:
A) MC and ATC would be equal at all levels of output.
B) AFC would become negative as output increases.
C) AVC and ATC would coincide.
D) ATC would be zero at all output levels.

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Application

154. Refer to the information.

The Sunshine Corporation finds that its costs are $40 when it produces no output. Its total variable costs (TVC) change with output as shown in the accompanying table.

Output	TVC
1	$30
2	50
3	65
4	85
5	110

The average fixed cost of 3 units of output:
A) is $13.33.
B) is $12.50.
C) is $40.
D) is $18.50.

Ans: A Level: Easy Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Calculation

155. Refer to the table.

Output	Total fixed cost	Total variable cost	Average variable cost
$ 0	$200	$ 0	
1	200	50	$50.00
2	200	90	45.00
3	200	120	40.00
4	200	160	40.00
5	200	220	44.00

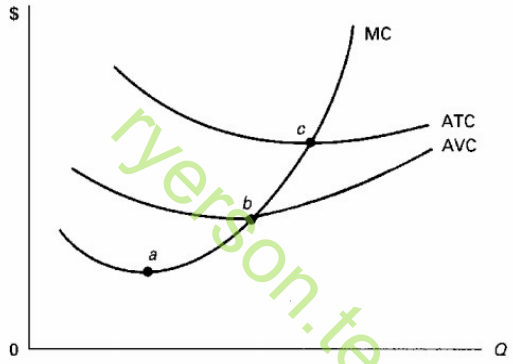
The average fixed cost of four units of output will be:
A) $40.00.
B) $50.00.
C) $66.67.
D) $100.00. Main Topic: 6.4 Short-run production costs Page: 146

Ans: B Level: Easy
Subtopic: Per-unit, or average costs Type: Calculation

156. Which of the following curves is not U-shaped?
A) MC
B) AFC
C) AVC
D) ATC Main Topic: 6.4 Short-run production costs Page: 146

Ans: B Level: Easy
Subtopic: Per-unit, or average costs Type: Application

157. Refer to the diagram.



This firm's average fixed costs are:
A) not shown.
B) the vertical distance between AVC and MC.
C) the vertical distance between AVC and ATC.
D) equal to the per unit change in MC.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Graphic

158. Refer to the data.

The accompanying table shows average total costs (ATC) for a manufacturing firm whose total fixed costs are $10:

Output	ATC
1	$40
2	27
3	29
4	31
5	38

The average variable cost of 4 units of output:
A) is $33.50.
B) is $28.50.
C) is $19.00.
D) is $21.00.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Calculation

159. The following cost data are for a firm in the short run:

Output	Total cost
0	$400
1	500
2	550
3	600
4	650
5	700

What is the firm's average variable cost at an output of 5 units?
A) $30
B) $60
C) $120
D) $140

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Calculation

160. If the total variable cost of 9 units of output is $90 and the total variable cost of 10 units of output is $120, then:
A) the average variable cost of 10 units is $10.
B) the average variable cost of 9 units is $10.
C) the marginal cost of the tenth unit is $90.
D) the firm is operating in the range of increasing marginal returns.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Application

161. If you know that total fixed cost is $200, total variable cost is $600, and total product is 4 units, then:
A) marginal cost is $50.
B) average fixed cost is $100.
C) average total cost is $100.
D) average variable cost is $150.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Calculation

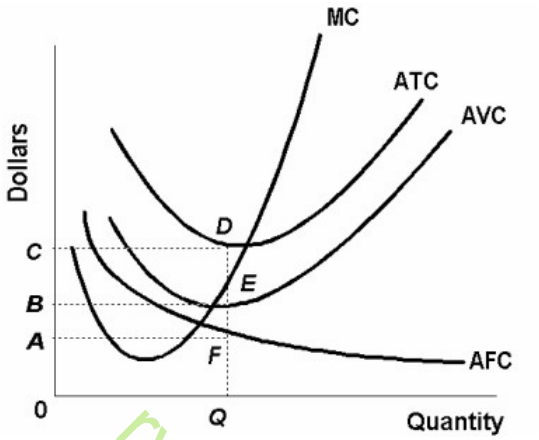
162. Refer to the table and information.
The fixed cost of the firm is $500. The firm's total variable cost is indicated in the table.

Output	**Total variable cost**
1	$400
2	720
3	1000
4	1400
5	2000
6	3600

The average variable cost of the firm when 5 units of output are produced is:
A) $100.
B) $200.
C) $300.
D) $400.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Calculation

Use the following to answer questions 163-167:



163. Refer to the diagram above. At output level Q average fixed cost:
A) is equal to EF.
B) is equal to QE.
C) is measured by both QF and ED.
D) cannot be determined from the information given.

Ans: C Level: Difficult Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Graphic

164. Refer to the diagram above. The vertical distance between ATC and AVC reflects:
A) the law of diminishing returns.
B) the average fixed cost at each level of output.
C) marginal cost at each level of output.
D) the presence of economies of scale.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Graphic

165. Refer to the diagram above. At output level Q total variable cost is:
A) 0BEQ.
B) BCDE.
C) 0CDQ.
D) 0AFQ.

Ans: A Level: Difficult Main Topic: 6.4 Short-run production costs Page: 146
Subtopic: Per-unit, or average costs Type: Graphic

166. Refer to the diagram above. At output level Q total fixed cost is:
A) 0BEQ.
B) BCDE.
C) 0BEQ-0AFQ.
D) 0CDQ. Main Topic: 6.4 Short-run production costs Page: 146

Ans: B Level: Difficult
Subtopic: Per-unit, or average costs Type: Graphic

167. Refer to the diagram above. At output level Q total cost is:
A) 0BEQ.
B) BCDE.
C) 0BEQ plus BCDE.
D) 0AFQ plus BCDE. Main Topic: 6.4 Short-run production costs Page: 146

Ans: C Level: Difficult
Subtopic: Per-unit, or average costs Type: Graphic

Use the following to answer question 168:

Refer to this information: TFC =Total Fixed Cost, MC = Marginal Cost, TVC=Total Variable Cost, Q = Quantity of Output, P = Product Price,

168. Average total cost is:
A equal to marginal cost.
B $\frac{TVC-TFC}{Q}$
C. $\frac{TVC}{Q}$
D. $\frac{TFC+TVC}{Q}$
A) Choice A
B) Choice B
C) Choice C
D) Choice D

Ans: D Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Formula

169. A firm has total fixed costs of $8,000 a year. The average variable cost is $5.00 for 2,000 units of output. At this level of output, its average total costs are:
A) $4.
B) $5.
C) $7.
D) $9.

Ans: D Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Calculation

170. The average total cost of five units of output:

Refer to the data.

Output	Average fixed cost	Average variable cost
1	$50.00	$100.00
2	25.00	80.00
3	16.67	66.67
4	12.50	65.00
5	10.00	68.00
6	8.37	73.33
7	6.14	80.00
8	6.25	86.50

A) is $69.
B) is $78.
C) is $3.
D) cannot be determined from the information given.

Ans: B Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Calculation

171. Refer to the table. The average total cost of producing 35 units of output is:

Input workers	Output	TFC	TVC	Total cost
0	0	50	0	
1	8	50	40	90
2	20	50	80	
3	28	50	120	170
4	35	50		210
5	41	50	200	250

A) $1.41.
B) $4.57.
C) $6.00.
D) $7.00.

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Calculation

172. Refer to the table and information. The fixed cost of the firm is $500. The firm's total variable cost is indicated in the table. The average total cost of the firm when 3 units of output are being produced is:

Output	**Total variable cost**
1	$400
2	720
3	1000
4	1400
5	2000
6	3600

A) $350.
B) $400.
C) $500.
D) $700. Main Topic: 6.4 Short-run production costs Page: 147

Ans: C Level: Moderate
Subtopic: Per-unit, or average costs Type: Calculation

173. Refer to the table.

Output	Total fixed cost	Total variable cost	Average variable cost
$ 0	$200	$ 0	
1	200	50	$50.00
2	200	90	45.00
3	200	120	40.00
4	200	160	40.00
5	200	220	44.00

The average total cost of two units of output will be:
A) $90.00.
B) $106.67.
C) $145.00.
D) $250.00.

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Calculation

174. Refer to the data.

Output	Total cost
0	$24
1	33
2	41
3	48
4	54
5	61
6	69

The average total cost of producing 3 units of output:
A) is $14.
B) is $12.
C) is $13.50.
D) is $16.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Calculation

175. For most producing firms:
A) marginal cost rises as output is carried to a certain level, and then begins to decline.
B) total costs rise as output is carried to a certain level, and then begin to decline.
C) average total costs decline as output is carried to a certain level, and then begin to rise.
D) average total costs rise as output is carried to a certain level, and then begin to decline.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Application

176. If one knows total costs for all levels of output, including zero output, it is possible to calculate:
A) average fixed cost.
B) average variable cost.
C) average total cost.
D) all of the above.

Ans: D Level: Difficult Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Application

177. A firm has fixed costs of $5,000. Its average variable cost is $2.00. At an output of 5,000 units its average total cost is:
A) $2.50.
B) $3.00.
C) $3.50.
D) $4.00.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Calculation

178. With fixed costs of $400, a firm has average total costs of $3 and average variable costs of $2.50. Its output is:
A) 200 units.
B) 400 units.
C) 800 units.
D) 1,600 units.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Per-unit, or average costs Type: Calculation

179. Marginal cost is the:
A) rate of change in total fixed cost which results from producing one more unit of output.
B) change in total cost which results from producing one more unit of output.
C) change in average variable cost which results from producing one more unit of output.
D) change in average total cost which results from producing one more unit of output.

Ans: B Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Definition

180. Which of the following statements is correct?
A) Average total cost is the difference between average variable cost and average fixed cost.
B) Marginal cost measures the cost per unit of output associated with any level of production.
C) When marginal product rises, marginal cost must also rise.
D) Marginal cost is the price or cost of an extra variable input (for example, an additional worker) divided by its marginal product.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Definition

181. Refer to the data.

Output	Total cost
0	$24
1	33
2	41
3	48
4	54
5	61
6	69

The marginal cost of producing the sixth unit of output:
A) is $24.
B) is $12.
C) is $16.
D) is $8.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Calculation

182. Refer to the information below.

TFC =Total Fixed Cost, MC = Marginal Cost,
TVC=Total Variable Cost, Q = Quantity of Output, P = Product Price,

Marginal cost is:
Choi ce A à TVC / Q
Choice B àTVC / àQ
Choice C P–Q / àQ
Choice D àTFC / àQ

A) Choice A
B) Choice B
C) Choice C
D) Choice D

Ans: B Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Formula

183. If a firm wanted to know how much it would save by producing one less unit of output, it would look to:
A) MC.
B) ATC.
C) AVC.
D) AFC.

Ans: A Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Application

184. In comparing the changes in TC and TVC associated with an additional unit of output, we find that:
A) the change in TVC is equal to MC, while the change in TC is equal to TFC.
B) the change in TC exceeds the change in TVC.
C) the change in TVC exceeds the change in TC.
D) both are equal to MC.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Application

185. Refer to the data.

Output	Average fixed cost	Average variable cost
1	$50.00	$100.00
2	25.00	80.00
3	16.67	66.67
4	12.50	65.00
5	10.00	68.00
6	8.37	73.33
7	6.14	80.00
8	6.25	86.50

The marginal cost of the fifth unit of output:
A) is $3.
B) is $62.
C) is $80.
D) cannot be determined from the information given.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Calculation

186. Refer to the table.

Input workers	Output	TFC	TVC	Total cost
0	0	50	0	
1	8	50	40	90
2	20	50	80	
3	28	50	120	170
4	35	50		210
5	41	50	200	250

When output increases from 28 to 35 units, the marginal cost of the product is:
A) $4.44.
B) $5.71.
C) $6.00.
D) $6.67.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Calculation

187. Refer to the information. The Sunshine Corporation finds that its costs are $40 when it produces no output. Its total variable costs (TVC) change with output as shown in the accompanying table.

Output	TVC
1	$30
2	50
3	65
4	85
5	110

The marginal cost of the third unit of output:
A) is $105.
B) is $25.
C) is $15.
D) is $20.

Ans: C Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Calculation

188. Refer to the data.

The accompanying table shows average total costs (ATC) for a manufacturing firm whose total fixed costs are $10:

Output	ATC
1	$40
2	27
3	29
4	31
5	38

The marginal cost of the fourth unit of output:
A) is $2.
B) is $12.
C) is $37.
D) is $16.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Calculation

189. Refer to the below table and information

The fixed cost of the firm is $500. The firm's total variable cost is indicated in the table.

Output	Total variable cost
1	$400
2	720
3	1000
4	1400
5	2000
6	3600

The marginal cost of the sixth unit of output is:
A) $400.
B) $600.
C) $1400.
D) $1600.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Calculation

190. Refer to the table.

Output	Total fixed cost	Total variable cost	Average variable cost
$ 0	$200	$ 0	
1	200	50	$50.00
2	200	90	45.00
3	200	120	40.00
4	200	160	40.00
5	200	220	44.00

The marginal cost of the third unit of output is:
A) $30.
B) $40.
C) $45.
D) $50.

Ans: A Level: Easy Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Calculation

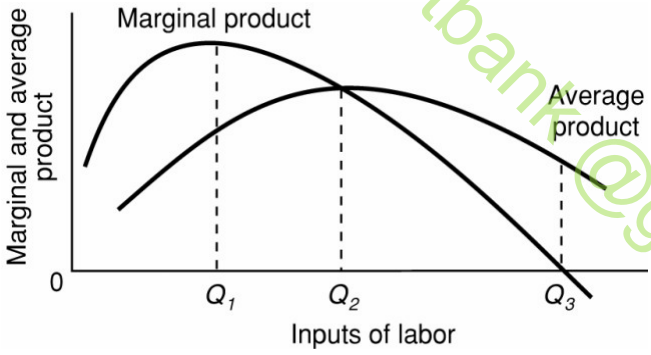
191. The following table shows the relationship between output and costs for two firms in the short run.

Output	Total cost firm A	Total cost firm B
0	$ 500	$ 800
1	1,000	1,200
2	1,600	1,500
3	2,300	1,800
4	2,900	2,200
5	3,800	2,700

Which of the following is correct?
A) A has greater fixed costs than B.
B) A has higher unit costs than B at low levels of output.
C) A has greater marginal costs than B at each level of output.
D) A experiences diminishing returns throughout the range of production.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 147
Subtopic: Marginal cost Type: Calculation

Use the following to answer questions 192-193:



192. Refer to the diagram above, where variable inputs of labour are being added to a constant amount of property factors of production. Marginal cost will be at a minimum for this firm when it is hiring:
A) Q_3 workers.
B) Q_2 workers.
C) Q_1 workers.
D) more than Q_3 workers.

Ans: C Level: Difficult Main Topic: 6.4 Short-run production costs Page: 149
Subtopic: Marginal cost Type: Graphic

193. Refer to the diagram above, where variable inputs of labour are being added to a constant amount of property factors of production. Average variable cost will be at a minimum when the firm is hiring:
A) Q_3 workers.
B) Q_2 workers.
C) Q_1 workers.
D) more than Q^3 workers.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs Page: 149
Subtopic: Marginal cost Type: Graphic

194. Which of the following is correct?
A) There is no relationship between MP and MC.
B) When AP is rising MC is falling, and when AP is falling MC is rising.
C) When MP is rising MC is rising, and when MP is falling MC is falling.
D) When MP is rising MC is falling, and when MP is falling MC is rising.

Ans: D Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Application

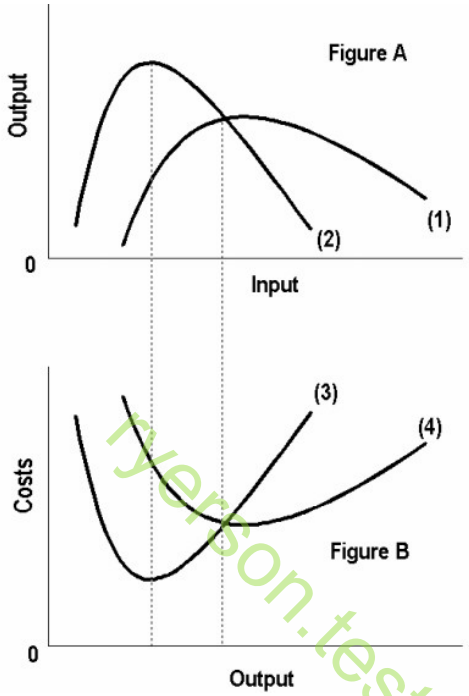
195. Which of the following holds true?
A) There is no relationship between AP and AVC.
B) When MP is rising AVC is falling, and when MP is falling AVC is rising.
C) When AP is rising AVC is falling, and when AP is falling AVC is rising.
D) When AP is rising AVC is rising, and when AP is falling AVC is falling.

Ans: C Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Application

196. The range over which average variable cost is increasing is the same as the range over which:
A) marginal cost is decreasing.
B) average fixed cost is increasing.
C) average product is increasing.
D) average product is decreasing.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Application

Use the following to answer questions 197-200:



197. Refer to the short-run production and cost data. In Figure A curve (1) is:
A) total product and curve (2) is average product.
B) total product and curve (2) is marginal product.
C) average product and curve (2) is marginal product.
D) marginal product and curve (2) is average product.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Graphic

198. Refer to the short-run production and cost data. In Figure B curve (3) is:
A) AVC and curve (4) is MC.
B) MC and curve (4) is AVC.
C) MC and curve (4) is AFC.
D) AFC and curve (4) is MC.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Graphic

199. Refer to the short-run production and cost data above. The curves of Figures A and B suggest that:
A) marginal product and marginal cost reach their maximum points at the same output.
B) marginal cost reaches a minimum where marginal product is at its maximum.
C) marginal cost and marginal product reach their minimum points at the same output.
D) AVC cuts MC at the latter's minimum point.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Graphic

200. Refer to the short-run production and cost data above. The curves of Figures A and B suggest that:
A) average product and average variable cost reach their maximum points at the same output.
B) AVC cuts MC at the latter's maximum point.
C) AVC reaches a minimum where AP is at its maximum.
D) AFC declines so long as output increases.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Graphic

201. Which of the following is correct?
A) When AP is rising, AVC is rising.
B) When AP is rising, AVC is falling.
C) When AP is rising, AP exceeds MP.
D) There is no relationship between AP and AVC.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Graphic

202. The short-run average total cost curve is U-shaped because:
A) average fixed costs decline continuously as output increases.
B) of increasing and diminishing returns.
C) of economies and diseconomies of scale.
D) minimum efficient scale is encountered.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Application

203. The following cost data are for a firm operating in the short run.

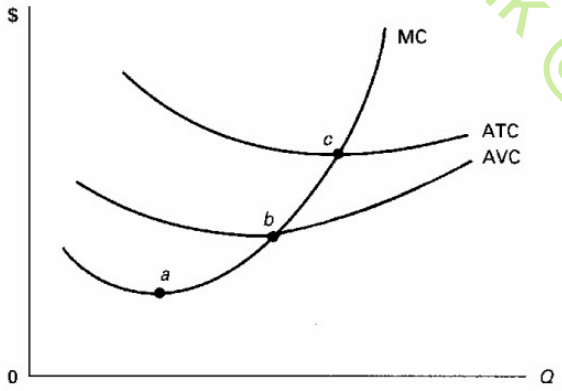
Output	Total cost
0	$ 400
1	900
2	1,300
3	1,600
4	2,000
5	2,500
6	3,100

Other things equal, diminishing returns begin to set in with the production of which unit of output?

A) 2
B) 3
C) 4
D) 5

Ans: C Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Calculation

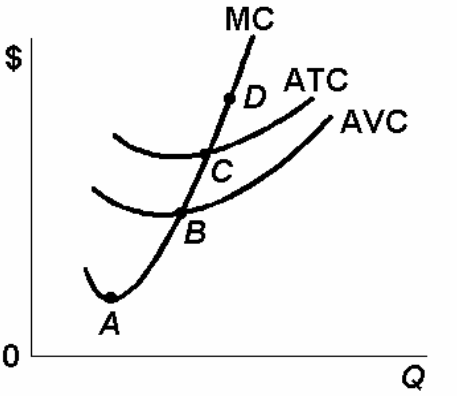
204. Refer to the diagram. If labour is the only variable input, the average product of labour is at a:



A) minimum at point b.
B) maximum at point b.
C) maximum at point a.
D) maximum at point c.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Graphic

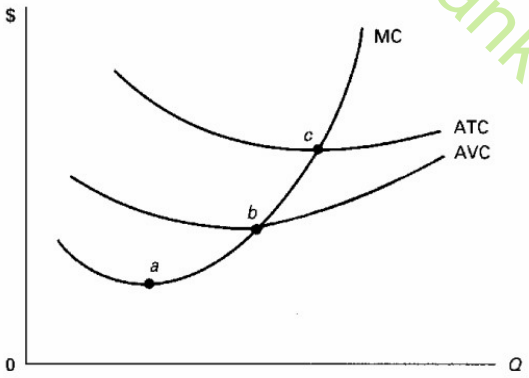
205. At which point of the graph is the MP the greatest?



A) point A
B) point B
C) point C
D) point D

Ans: A Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Graphic

206. Refer to the diagram. If labour is the only variable input, the marginal product of labour is at a:



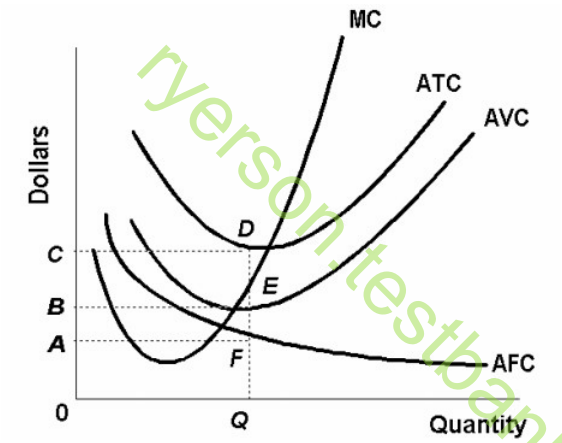
A) maximum at point a.
B) minimum at point a.
C) maximum at point b.
D) maximum at point c.

Ans: A Level: Easy Main Topic: 6.4 Short-run production costs Page: 149-150
Subtopic: Marginal cost Type: Graphic

207. The reason the marginal cost curve eventually increases as output increases for the typical firm is because:
A) of diseconomies of scale.
B) of minimum efficient scale.
C) of the law of diminishing returns.
D) normal profit exceeds economic profit.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Application

208. Refer to the diagram. At output level Q:



A) marginal product is falling.
B) marginal product is rising.
C) marginal product is negative.
D) one cannot determine whether marginal product is falling or rising.

Ans: A Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 149-150 Subtopic: Marginal cost Type: Graphic

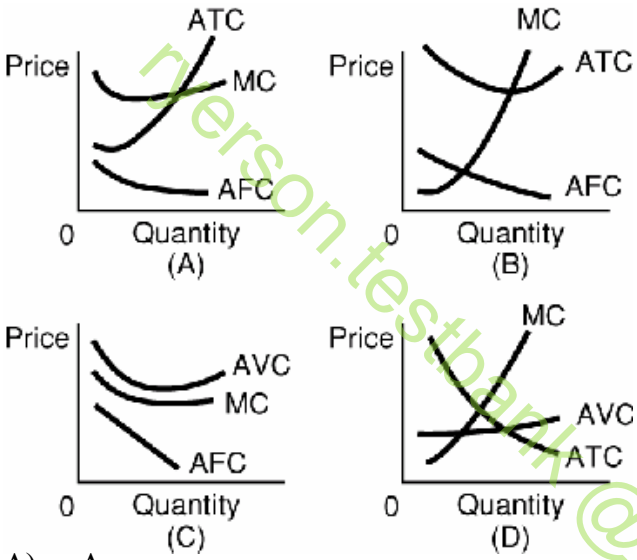
209. Which of the following is correct as it relates to cost curves?
A) Average variable cost intersects marginal cost at the latter's minimum point.
B) Marginal cost intersects average total cost at the latter's minimum point.
C) Average fixed cost intersects marginal cost at the latter's minimum point.
D) Marginal cost intersects average fixed cost at the latter's minimum point.

Ans: B Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Application

210. Assume a firm is operating at minimum average total cost in the short run. If there is a decrease in output it follows that:
A) marginal cost increases.
B) average fixed cost increases.
C) average total costs decrease.
D) average variable cost increases.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Application

211. Which of the graphs is correct?



A) A
B) B
C) C
D) D

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Graphic

212. The relationship between marginal cost and average fixed cost is such that:
A) declines in MC cause AFC to decline as output increases.
B) increases in MC cause AFC to increase as output increases.
C) MC intersects AFC at that output where AFC is at a minimum.
D) none of the above are true.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Application

213. Marginal cost:
A) equals both average variable cost and average total cost at their respective minimums.
B) is the difference between total cost and total variable cost.
C) rises for a time, but then begins to decline when diminishing returns set in.
D) declines continuously as output increases.

Ans: A Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Application

214. If average total cost is declining, then:
A) marginal cost must be greater than average total cost.
B) the average fixed cost curve must lie above the average variable cost curve.
C) marginal cost must be less than average total cost.
D) total cost must also be declining.

Ans: C Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Application

215. The relationship between the marginal cost and the average total cost schedule is such that:
A) the behaviour of one schedule does not affect the other.
B) if ATC exceeds MC, MC must be rising.
C) if MC is declining, ATC may be either declining or rising.
D) if MC is declining, ATC must also be declining.

Ans: D Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Application

216. If marginal cost is:
A) falling, then average total cost must also be falling.
B) rising, then average total cost must also be rising.
C) rising, then average total cost could be either falling or rising.
D) falling, then average total cost could be either falling or rising.

Ans: C Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Application

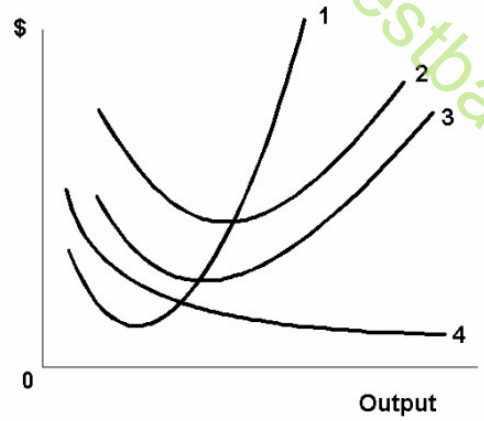
217. If marginal cost is below average variable cost:
A) average total cost is increasing but average variable cost is decreasing.
B) both average total cost and average variable cost are decreasing.
C) both average total cost and average variable cost are increasing.
D) average variable cost is less than average fixed cost.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Application

218. If marginal cost exceeds average variable cost, then:
A) average variable cost must be increasing.
B) average total cost must be increasing.
C) average fixed costs must be increasing.
D) marginal cost must be decreasing.

Ans: A Level: Difficult Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Marginal cost Type: Application

219. In the figure, curves 1, 2, 3, and 4 represent the:



A) ATC, MC, AFC, and AVC curves respectively.
B) AFC, MC, AVC, and ATC curves respectively.
C) MC, ATC, AVC, and AFC curves respectively.
D) ATC, AVC, AFC, and MC curves respectively.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs
Page: 150 Subtopic: Marginal cost Type: Graphic

220. Refer to the data below.

Output	Average fixed cost	Average variable cost
1	$50.00	$100.00
2	25.00	80.00
3	16.67	66.67
4	12.50	65.00
5	10.00	68.00
6	8.37	73.33
7	6.14	80.00
8	6.25	86.50

The marginal cost curve would intersect the average variable cost curve at about:
A) 2 units of output.
B) 4 units of output.
C) 6 units of output.
D) 7 units of output.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Marginal cost Type: Calculation

221. If the short-run average variable cost of production for a firm is decreasing, then it follows that:
A) average variable cost must be above average fixed cost.
B) marginal cost must be below average variable cost.
C) average fixed cost must be constant.
D) marginal cost must be decreasing.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Marginal cost Type: Application

222. The following data show the relationship between total costs and output in the short run.

Output	Total cost
0	$ 5
1	8
2	12
3	15
4	20
5	27

The firm's marginal costs are equal to average total cost somewhere between units:
A) 1 and 2.
B) 2 and 3.
C) 3 and 4.
D) 4 and 5.

Ans: C Level: Difficult Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Marginal cost Type: Calculation

223. Over the range of output where the slope of the short-run total cost curve becomes steeper:
A) fixed costs are increasing.
B) marginal cost is increasing.
C) marginal cost is positive, but could be increasing or decreasing.
D) marginal cost is necessarily greater than average variable cost.

Ans: B Level: Difficult Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Marginal cost Type: Application

224. At the level of output where marginal cost equals average variable cost:
A) average total cost is decreasing.
B) average variable cost is decreasing.
C) marginal cost equals average total cost.
D) marginal cost is decreasing.

Ans: A Level: Difficult Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Marginal cost Type: Application

225. Other things equal, if the prices of a firm's variable inputs were to fall:
A) one could not predict how unit costs of production would be affected.
B) marginal cost, average variable cost, and average fixed cost would all fall.
C) marginal cost, average variable cost, and average total cost would all fall.
D) average variable cost would fall, but marginal cost would be unchanged.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Shifts of cost curves Type: Application

226. Other things equal, if the fixed costs of a firm were to increase by $100,000 per year, which of the following would happen?
A) Marginal costs and average variable costs would both rise.
B) Average fixed costs and average variable costs would rise.
C) Average fixed costs and average total costs would rise.
D) Average fixed costs would rise, but marginal costs would fall.

Ans: C Level: Moderate Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Shifts of cost curves Type: Application

227. If a technological advance reduces the amount of variable factors of production needed to produce any level of output, then:
A) the AVC curve will shift downward.
B) the MC curve will shift downward.
C) the ATC curve will shift downward.
D) all of the above.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Shifts of cost curves Type: Application

228. Other things equal, if the wage rates paid to a firm's labour inputs were to rise, we would expect the:
A) AFC, AVC, ATC, and MC curves all to rise.
B) AVC, ATC, and MC curves all to rise.
C) AFC and ATC curves to fall.
D) MP curve to fall.

Ans: B Level: Easy Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Shifts of cost curves Type: Application

229. If a technological advance increases a firm's labour productivity, we would expect its:
A) average total cost curve to rise.
B) average total cost curve to fall.
C) total cost curve to rise.
D) average total cost curve to be unaffected.

Ans: B Level: Easy Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Shifts of cost curves Type: Application

230. If the price of labour or some other variable factor of production decreased, the:
A) AVC curve would shift upward.
B) AFC curve would shift downward.
C) AFC curve would shift upward.
D) MC curve would shift downward.

Ans: D Level: Moderate Main Topic: 6.4 Short-run production costs Page: 150
Subtopic: Shifts of cost curves Type: Application

231. In the long run:
A) all costs are variable costs.
B) all costs are fixed costs.
C) variable costs equal fixed costs.
D) fixed costs are greater than variable costs.

Ans: A Level: Easy Main Topic: 6.5 Long-run production costs Page: 151
Subtopic: Firm size and costs Type: Definition

232. The long-run average total cost curve:
A) displays declining unit costs so long as output is increasing.
B) indicates the lowest unit costs achievable when a firm has had sufficient time to alter plant size.
C) has a shape which is the inverse of the law of diminishing returns.
D) can be derived by summing horizontally the average total cost curves of all firms in an industry.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 151
Subtopic: Firm size and costs Type: Definition

233. What is the long-run average cost of producing 30 units of output?

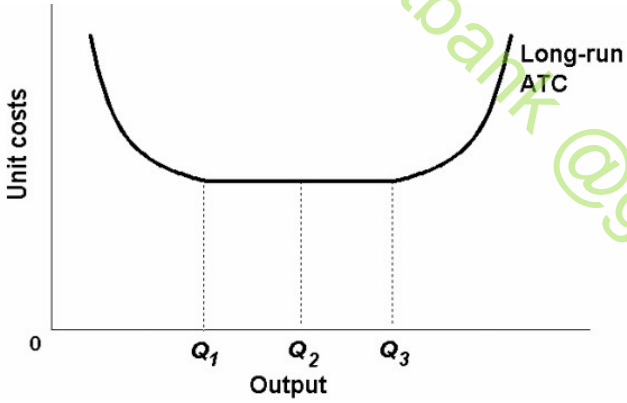
Refer to the following table which shows three short-run cost schedules for three plants of different sizes that a firm might build in the long run.

Plant 1		*Plant 2*		*Plant 3*	
Output	**ATC**	**Output**	**ATC**	**Output**	**ATC**
10	$10	10	$15	10	$20
20	9	20	10	20	15
30	8	30	7	30	10
40	9	40	10	40	8
50	10	50	14	50	9

A) $7
B) $8
C) $9
D) $10

Ans: A Level: Moderate Main Topic: 6.5 Long-run production costs Page: 151
Subtopic: Firm size and costs Type: Application

234. In the diagram it is assumed that:



A) some costs are fixed and other costs are variable.
B) all costs are variable.
C) the law of diminishing returns determines the shape of the cost curve.
D) marginal product first falls, but ultimately rises as output is increased.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 151
Subtopic: Firm size and costs Type: Graphic

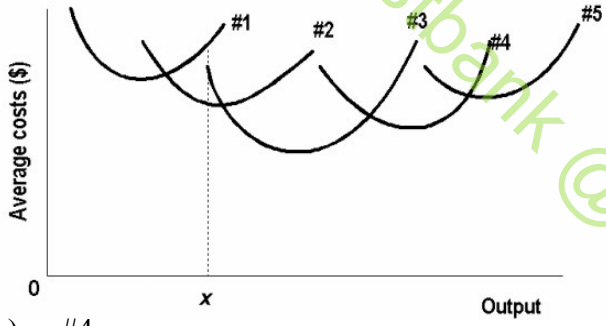
235. In the long run a firm will choose a plant size that has the:
A) minimum of average fixed costs.
B) capacity to produce the largest quantity of the product.
C) minimum average total cost of producing the target level of output.
D) maximum level of factor of production use per unit of the total product of output.

Ans: C Level: Difficult Main Topic: 6.5 Long-run production costs Page: 151
Subtopic: Firm size and costs Type: Application

236. The long-run average total cost curve:
A) will rise if diminishing returns are encountered.
B) will fall if diminishing returns are encountered.
C) will rise if economies of scale are incurred.
D) is based on the assumption that all factors of production are variable.

Ans: D Level: Easy Main Topic: 6.5 Long-run production costs Page: 151
Subtopic: The long-run cost curve Type: Application

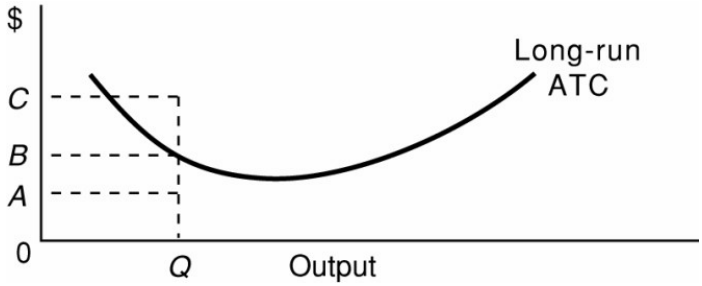
237. The diagram shows the short-run average total cost curves for five different plant sizes of a firm. In the long run the firm should produce output 0_x with a plant of size:



A) #4
B) #3.
C) #2.
D) #1. Main Topic: 6.5 Long-run production costs Page: 151-152

Ans: C Level: Easy
Subtopic: The long-run cost curve Type: Graphic

Use the following to answer questions 238-240:



238. Refer to the diagram above. For output level Q, per unit costs of C are:
A) unobtainable and imply the inefficient use of factors of production.
B) unobtainable, given factor of production prices and the current state of technology.
C) obtainable, but imply the inefficient use of factors of production.
D) obtainable and imply that factors of production are being combined efficiently.

Ans: C Level: Easy Main Topic: 6.5 Long-run production costs Page: 151-152
Subtopic: The long-run cost curve Type: Graphic

239. Refer to the diagram above. For output level Q, per unit costs of B are:
A) unobtainable and imply the inefficient use of factors of production.
B) unobtainable, given factor of production prices and the current state of technology.
C) obtainable, but imply the inefficient use of factors of production.
D) obtainable and imply least-cost production of this output.

Ans: D Level: Easy Main Topic: 6.5 Long-run production costs Page: 151-152
Subtopic: The long-run cost curve Type: Graphic

240. Refer to the diagram above. For output level Q, per unit costs of A are:
A) unobtainable and imply the inefficient use of factors of production.
B) unobtainable, given factor of production prices and the current state of technology.
C) obtainable, but imply the inefficient use of factors of production.
D) obtainable and imply least-cost production of this output.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 151-152
Subtopic: The long-run cost curve Type: Graphic

Use the following to answer questions 241-242:

The letters A, B, and C designate three successively larger plant sizes.

Output	ATC-A	ATC-B	ATC-C
10	$6	$13	$44
20	5	9	35
30	4	6	27
40	5	4	20
50	7	3	14
60	10	4	11
70	14	5	8
80	19	7	6
90	25	10	5
100	32	16	7

241. Refer to the data above. In the long run the firm should use plant size "A" for:
A) all possible levels of output.
B) 10 to 30 units of output.
C) 30 to 60 units of output.
D) all outputs greater than 40.

Ans: B Level: Difficult Main Topic: 6.5 Long-run production costs
Page: 151-152 Subtopic: The long-run cost curve Type: Application

242. Refer to the data above. In the long run the firm should use plant size "C" for:
A) all possible levels of output.
B) 10 to 30 units of output.
C) 40 to 70 units of output.
D) all units of output greater than 80.

Ans: D Level: Difficult Main Topic: 6.5 Long-run production costs
Page: 151-152 Subtopic: The long-run cost curve Type: Application

Use the following to answer questions 243-245:

Plant sizes get larger as you move from ATC-1 to ATC-4.

Output	ATC-1	ATC-2	ATC-3	ATC-4
1500	$10	$15	$20	$30
2000	8	12	17	25
2500	9	10	15	20
3000	12	8	13	18
3500	15	6	11	16
4000	18	10	9	14
4500	20	12	7	12
5000	24	15	11	10
5500	29	19	13	8
6000	35	25	15	9

243. Refer to the table above. Which plant size would produce at least cost for the 3000-4000 level of output?
A) 1
B) 2
C) 3
D) 4

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 151-152
Subtopic: The long-run cost curve Type: Application

244. Refer to the table above. Which plant size would produce at least cost for the 5000-6000 level of output?
A) 1
B) 2
C) 3
D) 4 Main Topic: 6.5 Long-run production costs Page: 151-152

Ans: D Level: Easy
Subtopic: The long-run cost curve Type: Application

245. Refer to the table above. In the long run the firm should use plant size ATC-3 for what level of output?
A)less than 3000. B)
3000 to 4000.
C) 4000 to 4500.
D) 5000 to 6000.

Ans: C Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 151-152 Subtopic: The long-run cost curve Type: Application

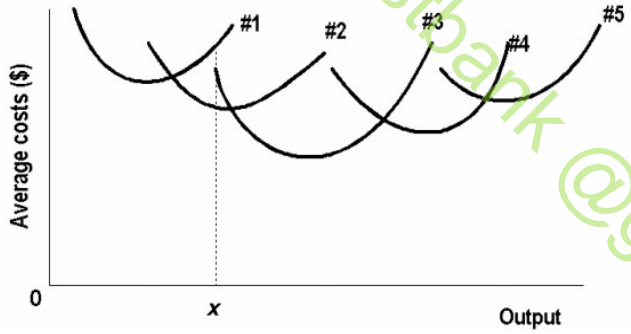
246. Economies of scale are indicated by:
A) the rising segment of the average variable cost curve.
B) the declining segment of the long-run average total cost curve.
C) the difference between total revenue and total cost.
D) a rising marginal cost curve.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 152
Subtopic: Economies and diseconomies of scale Type: Definition

247. A firm encountering economies of scale over some range of output will have a:
A) rising long-run average cost curve.
B) falling long-run average cost curve.
C) constant long-run average cost curve.
D) rising, then falling, then rising long-run average cost curve.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 152
Subtopic: Economies and diseconomies of scale Type: Application

248. The following graph shows the short-run average total cost curves for five different plant sizes of a firm. The position of these five curves in relation to one another reflects:



A) economies and diseconomies of scale.
B) the effect of fixed costs on ATC as output increases.
C) the law of constant costs.
D) the law of diminishing returns.

Ans: B Level: Moderate Main Topic: 6.5 Long-run production costs Page: 152
Subtopic: Economies and diseconomies of scale Type: Graphic

249. The larger the diameter of a natural gas pipeline, the lower is the average total cost of transmitting 1,000 cubic feet of gas 1,000 miles. This is an example of:
A) economies of scale.
B) normative economies.
C) diminishing marginal returns.
D) an increasing marginal product of labour.

Ans: A Level: Easy Main Topic: 6.5 Long-run production costs Page: 152
Subtopic: Economies and diseconomies of scale Type: Application

250. Round Things, Inc.'s production process exhibits economies of scale. Currently their long-run average cost = $1/unit. If Round Things doubles its use of all inputs, its new long-run average total cost will be:
A) $1/unit.
B) less than $1/unit.
C) greater than $2/unit.
D) greater than $1/unit but less than $2/unit.

Ans: B Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 152-154 Subtopic: Economies and diseconomies of scale Type: Application

251. If a firm doubles its output in the long run and its unit costs of production decline, we can conclude that:
A) technological progress has occurred.
B) economies of scale are being realized.
C) the firm is encountering diminishing returns.
D) diseconomies of scale are being encountered.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 152-154
Subtopic: Economies and diseconomies of scale Type: Definition

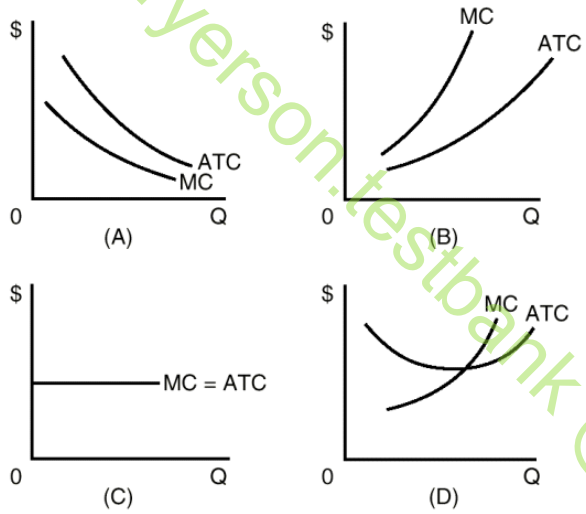
252. If long-run average total cost decreases as output increases, this is due to:
A) declining average fixed costs.
B) the law of diminishing returns.
C) economies of scale.
D) externalities.

Ans: C Level: Easy Main Topic: 6.5 Long-run production costs Page: 152-154
Subtopic: Economies and diseconomies of scale Type: Application

253. The primary reason why an introductory textbook costs less than an advanced textbook, even though the introductory textbook is several hundred pages longer and has fancier printing, is because of:
A) the law of diminishing returns.
B) constant returns to scale.
C) economies of scale.
D) sunk costs.

Ans: C Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 152-154 Subtopic: Economies and diseconomies of scale Type: Application

254. "The bigger the volume, the lower the cost, and we pass these savings on to you" is a familiar slogan. It implies the situation shown in the graph:



A) A.
B) B.
C) C.
D) D.

Ans: A Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 152-154 Subtopic: Economies and diseconomies of scale Type: Graphic

255. When a firm doubles its inputs and finds that its output has more than doubled, this is known as:
A) economies of scale.
B) constant returns to scale.
C) diseconomies of scale.
D) a violation of the law of diminishing returns.

Ans: A Level: Easy Main Topic: 6.5 Long-run production costs Page: 152-154
Subtopic: Economies and diseconomies of scale Type: Definition

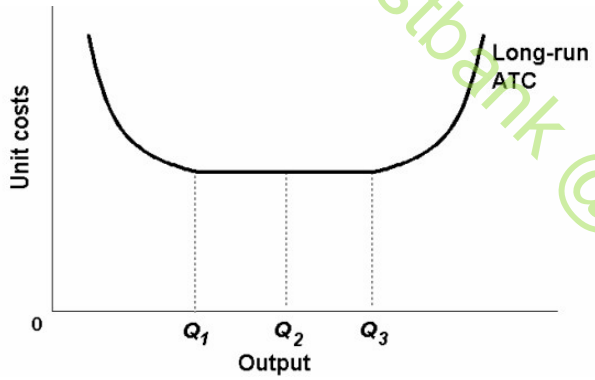
256. If all factors of production used in the production of a product are increased by 5 percent and output increases by more than 5 percent, then the firm is experiencing:
A) economies of scale.
B) diseconomies of scale.
C) constant returns to scale.
D) increasing average total costs.

Ans: A Level: Easy Main Topic: 6.5 Long-run production costs Page: 152-154
Subtopic: Economies and diseconomies of scale Type: Definition

257. If a firm is experiencing economies of scale, we can predict that:
A) the long-run average total cost curve is upward sloping.
B) a 10 percent increase in all inputs will increase output by less than 10 percent.
C) a 10 percent increase in all inputs will increase output by more than 10 percent.
D) the firm is encountering problems of managerial bureaucracy because of its size.

Ans: C Level: Easy Main Topic: 6.5 Long-run production costs Page: 152-154
Subtopic: Economies and diseconomies of scale Type: Application

258. Refer to the diagram. Economies of scale:



A) are evident over the entire range of output.
B) occur over the $0Q_1$ range of output.
C) begin at output Q_3.
D) occur only over the Q_1Q_3 range of output.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 152-154
Subtopic: Economies and diseconomies of scale Type: Graphic

259. If a firm increases all of its inputs by 10 percent and its output increases by 15 percent, we can say that:
A) it is encountering diseconomies of scale.
B) it is encountering economies of scale.
C) the law of diminishing returns is taking hold.
D) the firm's long-run ATC curve will be rising.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 152-154
Subtopic: Economies and diseconomies of scale Type: Definition

260. A firm is encountering increasing returns to scale when it increases all of its inputs by 20 percent and its output increases by:
A) 10 percent.
B) 15 percent.
C) 20 percent.
D) 25 percent.

Ans: D Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 152-154 Subtopic: Economies and diseconomies of scale
Type: Application

261. The following are short-run conditions for a firm.

Output	Total cost
0	$ 80
1	160
2	240
3	320
4	400
5	480
6	560

All of the following statements are correct, except that the firm has:
A) realized economies of scale.
B) fixed costs of $80.
C) constant marginal cost.
D) an average fixed cost of $20 at 4 units of output.

Ans: A Level: Difficult Main Topic: 6.5 Long-run production costs
Page: 152-154 Subtopic: Economies and diseconomies of scale Type: Calculation

262. Which would contribute most to a firm experiencing "economies of scale"?
A) rising long-run average costs
B) the law of diminishing marginal returns
C) specialization of production within a firm
D) deterioration of information and control within a firm

Ans: C Level: Moderate Main Topic: 6.5 Long-run production costs Page: 154
Subtopic: Economies and diseconomies of scale Type: Application

263. The term diseconomies of scale is reflected in:
A) decreasing short-run average costs.
B) increasing long-run average costs.
C) increasing short-run marginal costs.
D) decreasing long-run prices.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 154
Subtopic: Economies and diseconomies of scale Type: Application

264. Diseconomies of scale:
A) pertain to the long run.
B) pertain to the short run.
C) are synonymous with diminishing returns.
D) are synonymous with increasing returns.

Ans: A Level: Easy Main Topic: 6.5 Long-run production costs Page: 154
Subtopic: Economies and diseconomies of scale Type: Definition

265. When diseconomies of scale occur:
A) the long-run average total cost curve falls.
B) marginal cost intersects average total cost.
C) the long-run average total cost curve rises.
D) average fixed costs will rise.

Ans: C Level: Easy Main Topic: 6.5 Long-run production costs Page: 154
Subtopic: Economies and diseconomies of scale Type: Application

266. Diseconomies of scale means that:
A) a firm's long-run average total cost curve is declining.
B) a firm's long-run average total cost curve is rising.
C) the advantages of specialization are being more fully realized.
D) a given increase in inputs results in a more-than-proportionate increase in output.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 154
Subtopic: Economies and diseconomies of scale Type: Definition

267. Which statement is not correct?
A) The real cost of producing X is the amounts of products Y, Z, etc., which might have been produced with the factors of production devoted to X.
B) Diseconomies of scale arise primarily from the difficulties in managing and coordinating a large-scale business enterprise.
C) The law of diminishing returns accounts for the fact that the long-run average total cost curve is U-shaped.
D) Average fixed costs diminish so long as output increases.

Ans: C Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Application

Use the following to answer questions 268-269:

Plant sizes get larger as you move from ATC-1 to ATC-4.

Output	ATC-1	ATC-2	ATC-3	ATC-4
1500	$10	$15	$20	$30
2000	8	12	17	25
2500	9	10	15	20
3000	12	8	13	18
3500	15	6	11	16
4000	18	10	9	14
4500	20	12	7	12
5000	24	15	11	10
5500	29	19	13	8
6000	35	25	15	9

268. Refer to the table above. Over what range of output are economies of scale experienced by this firm?
A) 1500 to 3000
B) 1500 to 3500
C) 2000 to 3500
D) 2000 to 4000

Ans: B Level: Difficult Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Application

269. Refer to the table above. Over what range of output are diseconomies of scale experienced by this firm?
A) 3000 to 6000
B) 3500 to 6000
C) 4000 to 6000
D) 4500 to 6000

Ans: B Level: Difficult Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Application

270. Refer to the data below. Economies of scale are realized over the ___ to ___ levels of output; diseconomies of scale exist over the ___to ___levels of output.

The letters A, B, and C designate three successively larger plant sizes.

Output	ATC-A	ATC-B	ATC-C
10	$6	$13	$44
20	5	9	35
30	4	6	27
40	5	4	20
50	7	3	14
60	10	4	11
70	14	5	8
80	19	7	6
90	25	10	5
100	32	16	7

A) 10, 30; 40, 100
B) 10, 40; 80, 100
C) 10, 50; 60, 100
D) 10, 70; 80, 100

Ans: C Level: Difficult Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Application

271. Economies and diseconomies of scale explain:
A) the profit-maximizing level of production.
B) why the firm's long-run average total cost curve is U-shaped.
C) why the firm's short-run marginal cost curve cuts the short-run average variable cost curve at its minimum point.
D) the distinction between fixed and variable costs.

Ans: B Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Definition

272. If all factors of production used in the production of a product are increased by 10 percent and output increases by less than 5 percent, then the firm is experiencing:
A) economies of scale.
B) diseconomies of scale.
C) constant returns to scale.
D) decreasing average total costs.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 154-155
Subtopic: Economies and diseconomies of scale Type: Application

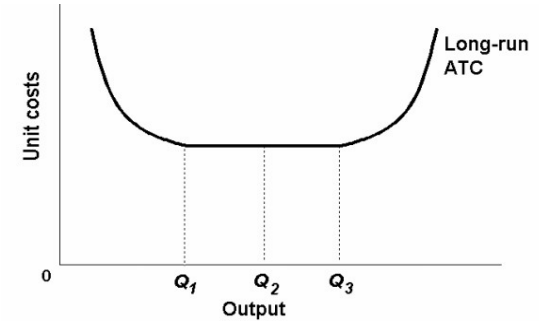
273. Diseconomies of scale arise primarily because:
A) the short-run average total cost curve rises when marginal product is increasing.
B) of the difficulties involved in managing and coordinating a large business enterprise.
C) firms must be large both absolutely and relative to the market to employ the most efficient productive techniques available.
D) beyond some point marginal product declines as additional units of a variable factor of production (labour) are added to a fixed factor of production (capital).

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 154-155
Subtopic: Economies and diseconomies of scale Type: Application

274. Which of the following relationships does not result from diminishing marginal returns?
A) diseconomies of scale
B) upward-sloping short-run supply curves
C) marginal product is the slope of the total product curve
D) when marginal product becomes negative, total product is necessarily declining

Ans: A Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Application

275. Refer to the diagram. Diseconomies of scale:



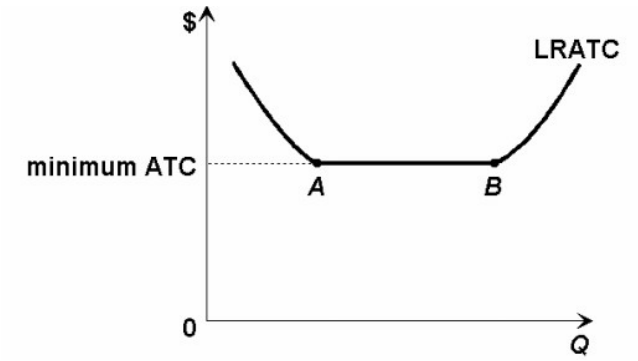
A) begin at output Q_1.
B) occur over the Q_1Q_3 range of output.
C) begin at output Q_3.
D) are in evidence at all output levels.

Ans: C Level: Easy Main Topic: 6.5 Long-run production costs Page: 154-155
Subtopic: Economies and diseconomies of scale Type: Graphic

276. Which of the following relationships does not result from diminishing marginal returns?
A) diseconomies of scale
B) upward-sloping short-run supply curves
C) marginal product is the slope of the total product curve
D) when marginal product becomes negative, total product is necessarily declining

Ans: A Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Application

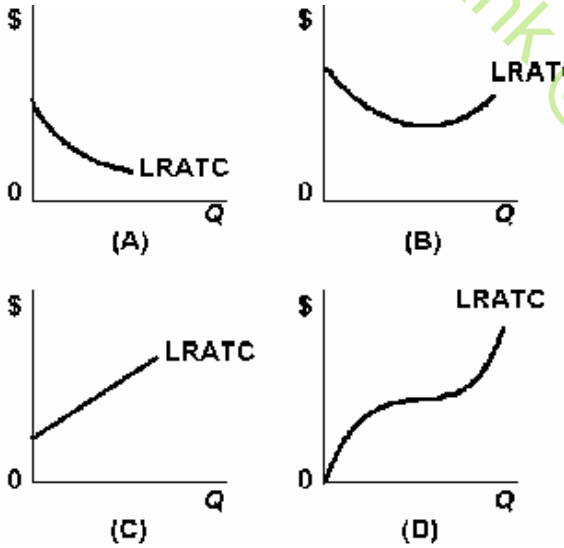
277. In the figure shown, the long-run average total cost curve (LRATC) indicates that there are diseconomies of scale:



A) to the left of point A.
B) to the right of point B.
C) at points A and B.
D) between points A and B.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 154-155
Subtopic: Economies and diseconomies of scale Type: Graphic

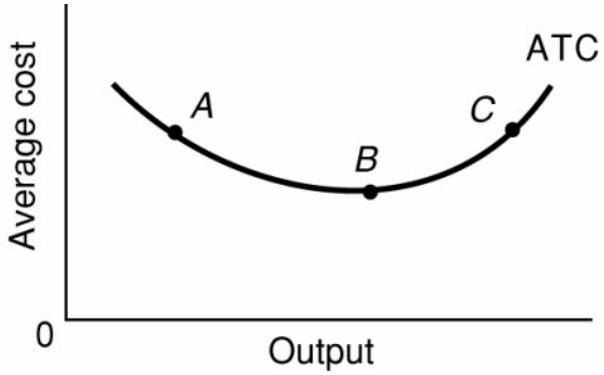
278. Which of the figures correctly depicts a firm which does not experience diseconomies of scale?



A) graph A
B) graph B
C) graph C
D) graph D

Ans: A Level: Difficult Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Graphic

279. In the long-run average total cost curve the:



A) movement from A to B reflects diseconomies of scale.
B) movement from B to C reflects diseconomies of scale.
C) realization of economies of scale would shift the entire curve downward.
D) movement from B to C reflects the law of diminishing returns.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 154-155
Subtopic: Economies and diseconomies of scale Type: Graphic

280. The ABC Corporation decreases all of its inputs by 12 percent and finds that its output falls by only 8 percent. This means that initially it was producing:
A) in the range of diseconomies of scale.
B) in the range of economies of scale.
C) where AP is less than MP.
D) at the point of minimum efficient scale.

Ans: A Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Application

281. If the long-run average total cost curve for a firm is horizontal in the relevant range of production, then it indicates that there:
A) is a minimum efficient scale.
B) are constant returns to scale.
C) are diseconomies of scale.
D) are economies of scale.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Application

282. If a firm increases all of its inputs by 10 percent and its output increases by 10 percent, we can say that:
A) it is encountering diseconomies of scale.
B) it is encountering economies of scale.
C) it is encountering constant returns to scale.
D) the marginal products of all inputs are falling.

Ans: C Level: Easy Main Topic: 6.5 Long-run production costs
Page: 154-155 Subtopic: Economies and diseconomies of scale Type: Application

283. The minimum efficient scale of a firm:
A) is realized somewhere in the range of diseconomies of scale.
B) occurs where marginal product becomes zero.
C) is in the middle of the range of constant returns to scale.
D) is the smallest level of output at which long-run average total cost is minimized.

Ans: D Level: Easy Main Topic: 6.5 Long-run production costs Page: 155
Subtopic: Minimum efficient scale and industry structure Type: Definition

284. Refer to the data.

The letters A, B, and C designate three successively larger plant sizes.

Output	ATC-A	ATC-B	ATC-C
10	$6	$13	$44
20	5	9	35
30	4	6	27
40	5	4	20
50	7	3	14
60	10	4	11
70	14	5	8
80	19	7	6
90	25	10	5
100	32	16	7

At what level of output is minimum efficient scale realized?
A) 30
B) 40
C) 50
D) 60 Main Topic: 6.5 Long-run production costs Page: 155

Ans: C Level: Moderate
Subtopic: Minimum efficient scale and industry structure Type: Application

285. Refer to the table.
Plant sizes get larger as you move from ATC-1 to ATC-4.

Output	ATC-1	ATC-2	ATC-3	ATC-4
1500	$10	$15	$20	$30
2000	8	12	17	25
2500	9	10	15	20
3000	12	8	13	18
3500	15	6	11	16
4000	18	10	9	14
4500	20	12	7	12
5000	24	15	11	10
5500	29	19	13	8
6000	35	25	15	9

The firm experiences minimum efficient scale at what output level?
A) 2500
B) 3000
C) 3500
D) 4000

Ans: C Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 155-156 Subtopic: Minimum efficient scale and industry structure
Type: Application

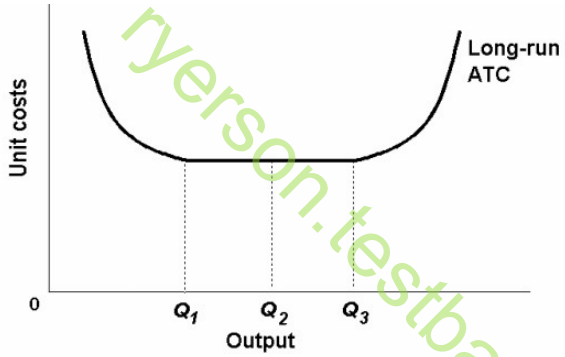
286. If the minimum efficient scale (MES) in an industry is 20 percent of the total consumption of a product, how many MES plants could be supported profitably in that industry?
A) 5
B) 10
C) 20
D) 100 Main Topic: 6.5 Long-run production costs Page: 155-156

Ans: A Level: Easy
Subtopic: Minimum efficient scale and industry structure Type: Application

287. If there are ten plants producing the total domestic consumption of the product and each plant is operating at minimum efficient scale, then each plant accounts for what percentage of domestic consumption?
A) 5 percent
B) 10 percent
C) 20 percent
D) 25 percent

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 155-156
Subtopic: Minimum efficient scale and industry structure Type: Application

288. Refer to the diagram. "Minimum efficient scale":



A) occurs at some output greater than Q_3.
B) is achieved at Q_1.
C) is achieved at Q_3.
D) cannot be identified in this diagram.

Ans: B Level: Easy Main Topic: 6.5 Long-run production costs Page: 155-156
Subtopic: Minimum efficient scale and industry structure Type: Graphic

289. If an industry's long-run average total cost curve has an extended range of constant returns to scale, this implies that:
A) technology precludes both economies and diseconomies of scale.
B) the industry will be a natural monopoly.
C) both relatively small and relatively large firms can be viable in the industry.
D) the industry will be comprised of a very large number of small firms.

Ans: C Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 155-156 Subtopic: Minimum efficient scale and industry structure
Type: Application

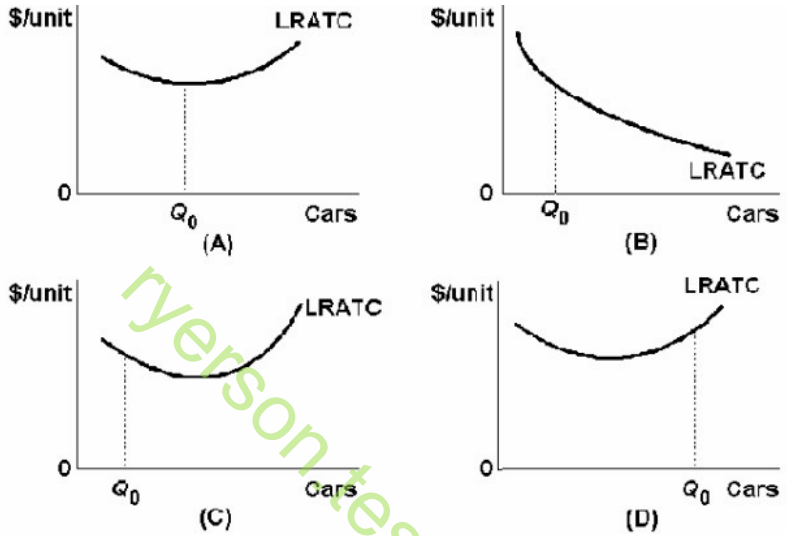
290. A natural monopoly exists when:
   A) unit costs are minimized by having one firm produce an industry's entire output.
   B) several formerly competing producers merge to become the only firm in an industry.
   C) short-run average total cost curves are tangent to long-run average total cost curves.
   D) minimum efficient scale is attained at a small level of output.

   Ans: A Level: Easy Main Topic: 6.5 Long-run production costs Page: 156
   Subtopic: Minimum efficient scale and industry structure Type: Definition

291. A natural monopoly is characterized by:
   A) collusion with other competitors to divide up the market.
   B) a decreasing average-cost curve over the feasible range of output.
   C) a firm protected from competition by a government regulation.
   D) a firm having control over the entire supply of a basic input in the production process.

   Ans: B Level: Moderate Main Topic: 6.5 Long-run production costs Page: 156
   Subtopic: Minimum efficient scale and industry structure Type: Definition

292. Assume that an aircraft company has opened a large manufacturing facility near Toronto with capacity Q_0 per year. Shortly thereafter, the plant was closed and two smaller ones were opened in the same vicinity, each more profitably producing about one-half as many aircrafts as the old facility. Of the long-run average total cost (LRATC) graphs below, which one best shows the initial situation when only one plant was operating?



A) graph A
B) graph B
C) graph C
D) graph D

Ans: D Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 156-157 Subtopic: Applications and illustrations Type: Graphic

293. A cost which cannot be partly or fully recovered through any subsequent action is known as a(n):
A) variable cost.
B) fixed cost.
C) marginal cost.
D) sunk cost.

Ans: D Level: Easy Main Topic: Last Word Page: 158 Type: Definition

294. Which of the following is an example of a sunk cost, as it relates to a firm?
A) an expenditure on raw materials used in the production process.
B) an expenditure on a non-refundable, non-transferable airline ticket.
C) an expenditure to buy a delivery van.
D) an expenditure for research and development.

Ans: B Level: Moderate Main Topic: Last Word Page: 158 Type: Application

295. Which of the following sayings relates most closely to the idea of sunk costs?
A) Don't cry over spilt milk.
B) A bird in the hand is worth two in the bush.
C) He who hesitates is lost.
D) Show me the money.

Ans: A Level: Easy Main Topic: Last Word Page: 158 Type: Application

296. Your car breaks down and you are deciding to have it repaired. The most relevant issue in this economic decision is:
A) how much you spent on past repairs on the car.
B) how much you paid for the car when you bought it.
C) whether you have saved money to buy a new car.
D) whether having the car repaired is worth the cost.

Ans: D Level: Moderate Main Topic: Last Word Page: 158 Type: Application

297. A fast-food company spends millions of dollars to develop and promote a new hamburger on their menu only to find that consumers won't buy it because they don't like the taste. From an economic perspective, the company should:
A) keep the hamburger on the menu because they've spent so much money and time developing and promoting the product.
B) spend more money to develop a more efficient way to cook the hamburger so it cooks in a shorter time.
C) pull the hamburger off the menu and treat the development and promotion expenditures as a sunk cost.
D) keep trying to sell the hamburger so that people who developed and promote it have a job with the company.

Ans: C Level: Moderate Main Topic: Last Word Page: 158 Type: Application

298. The real opportunity cost of producing product X is the amounts of products Y, Z, and so forth, which might have been produced if factors of production had not been used to produce X.

Ans: True Level: Easy Main Topic: 6.2 Economic costs Page: 137
Type: Definition

299. Normal profit is an implicit cost.

Ans: True Level: Moderate Main Topic: 6.2 Economic costs Page: 138
Type: Definition

300. When economic profits equal zero, normal profits are negative or equal zero.

Ans: False Level: Moderate Main Topic: 6.2 Economic costs Page: 138
Type: Definition

301. Economic profits are usually larger than accounting profits.

Ans: False Level: Difficult Main Topic: 6.2 Economic costs Page: 138
Type: Application

302. The short run is a period of time during which all costs are fixed costs.

Ans: False Level: Easy Main Topic: 6.2 Economic costs Page: 138
Type: Definition

303. In the short run, the size (or capacity) of a firm's plant is variable.

Ans: False Level: Moderate Main Topic: 6.2 Economic costs Page: 138-139
Type: Application

304. When the marginal product of the variable input begins to decrease, total product also begins to decrease.

Ans: False Level: Difficult Main Topic: 6.3 Short-run production relationships
Page: 140 Type: Application

305. The law of diminishing returns states that as successive amounts of a variable factor of production are added to a fixed factor of production, beyond some point marginal product will diminish.

Ans: True Level: Easy Main Topic: 6.3 Short-run production relationships
Page: 140 Type: Definition

306. The law of diminishing marginal productivity explains why short-run production costs increase directly with a firm's level of output.

Ans: False Level: Moderate Main Topic: 6.3 Short-run production relationships
Page: 140 Type: Application

307. When total product is increasing at a decreasing rate, marginal product is positive, but falling.

Ans: True Level: Moderate Main Topic: 6.3 Short-run production relationships
Page: 141-142 Type: Application

308. At zero units of output a firm's variable costs are zero.

Ans: True Level: Easy Main Topic: 6.4 Short-run production costs Page: 144
Type: Application

309. Variable costs are costs which vary directly with output.

Ans: True Level: Easy Main Topic: 6.4 Short-run production costs Page: 145
Type: Definition

310. Average fixed costs diminish continuously as output increases.

Ans: True Level: Easy Main Topic: 6.4 Short-run production costs Page: 146
Type: Application

311. The short-run marginal-cost curve is upward-sloping because of the law of diminishing marginal returns.

Ans: True Level: Difficult Main Topic: 6.3 Short-run production relationships
Page: 147 Type: Application

312. If the marginal-cost curve lies below the average-variable-cost curve, the average-variable-cost curve must be falling.

Ans: True Level: Difficult Main Topic: 6.4 Short-run production costs
Page: 147-148 Type: Application

313. When average costs are increasing, marginal costs are greater than average costs.

Ans: True Level: Easy Main Topic: 6.4 Short-run production costs
Page: 147-148 Type: Application

314. The law of diminishing returns explains why the long-run average total cost curve is U-shaped.

Ans: False Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 151-152 Type: Application

315. A major factor explaining economies of scale is increased specialization of labour.

Ans: True Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 152 Type: Application

316. If a firm triples its factor of production inputs and as a result output triples, then the long-run average cost curve is declining.

Ans: False Level: Easy Main Topic: 6.5 Long-run production costs
Page: 152-154 Type: Application

317. Diseconomies of scale stem primarily from the difficulties in managing and coordinating a large-scale business enterprise.

Ans: True Level: Easy Main Topic: 6.5 Long-run production costs
Page: 154 Type: Definition

318. Diseconomies of scale are caused by the law of diminishing marginal returns.

Ans: False Level: Difficult Main Topic: 6.5 Long-run production costs
Page: 154 Type: Application

319. Minimum efficient scale occurs at the smallest level of output at which a firm can minimize long-run average costs.

Ans: True Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 155-156 Type: Application

320. The fundamental reason that newspapers have such high prices is the high production costs from diseconomies of scale.

Ans: False Level: Moderate Main Topic: 6.5 Long-run production costs
Page: 155-156 Type: Application

321. The large increase in the price of corn in recent years has had a wide impact on the industries which use corn as an input.

Ans: True Level: Easy Main Topic: 6.5 Long-run production costs Page: 156
Type: Application

322. Some of a firm's costs are not only fixed, but are sunk.

Ans: True Level: Moderate Main Topic: Last word Page: 158
Type: Application

CHAPTER 7

Perfect Competition

Chapter 7 Perfect Competition

1. In which of the following industry structures is the entry of new firms the most difficult?
   A) monopoly
   B) oligopoly
   C) monopolistic competition
   D) perfect competition

   Ans: A Level: Easy Main Topic: 7.1 Four market structures Page: 163
   Subtopic: Four market structures Type: Application

2. A one-firm industry is known as:
   A) monopolistic competition
   B) oligopoly
   C) monopoly
   D) perfect competition

   Ans: C Level: Easy Main Topic: 7.1 Four market structures Page: 163
   Subtopic: Four market structures Type: Definition

3. Local telephone, electric, or gas utilities would best be described by which market model?
   A) monopolistic competition
   B) perfect competition
   C) monopoly
   D) oligopoly

   Ans: C Level: Moderate Main Topic: 7.1 Four market structures Page: 163
   Subtopic: Four market structures Type: Application

4. An industry comprised of a small number of firms, each of which considers the potential reactions of its rivals in making price-output decisions is called:
   A) monopolistic competition
   B) oligopoly
   C) monopoly
   D) perfect competition

   Ans: B Level: Easy Main Topic: 7.1 Four market structures Page: 164
   Subtopic: Four market structures Type: Application

5. Mutual interdependence would tend to limit control over price in which market model?
   A) monopolistic competition
   B) perfect competition
   C) monopoly
   D) oligopoly

   Ans: D Level: Easy Main Topic: 7.1 Four market structures Page:164
   Subtopic: Four market structures Type: Application

6. Economists use the term "imperfect competition" to describe:
   A) all industries which produce standardized products.
   B) any industry in which there is no nonprice competition.
   C) a monopoly only.
   D) those markets which are not perfectly competitive.

   Ans: D Level: Easy Main Topic: 7.1 Four market structures Page: 164
   Subtopic: Four market structures Type: Definition

7. In which two market models would advertising be used most often?
   A) perfect competition and monopolistic competition
   B) perfect competition and monopoly
   C) monopolistic competition and oligopoly
   D) monopoly and oligopoly

   Ans: C Level: Moderate Main Topic: 7.1 Four market structures Page: 164
   Subtopic: Four market structures Type: Application

8. The North American automobile industry would be described by the economist as:
   A) perfectly competitive.
   B) an oligopoly.
   C) monopolistically competitive.
   D) a monopoly.

   Ans: B Level: Easy Main Topic: 7.1 Four market structures Page: 164
   Subtopic: Four market structures Type: Application

9. In which of the following market structures is there clear-cut mutual interdependence with respect to price-output policies?
   A) monopoly
   B) oligopoly
   C) monopolistic competition
   D) perfect competition

   Ans: B Level: Easy Main Topic: 7.1 Four market structures Page: 164
   Subtopic: Four market structures Type: Application

10. The market model with the largest number of firms is:
    A) oligopoly.
    B) monopoly.
    C) perfect competition.
    D) monopolistic competition.

    Ans: C Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Characteristics of perfect competition Type: Application

11. An industry comprised of a very large number of sellers producing a standardized product is known as:
    A) monopolistic competition
    B) oligopoly
    C) monopoly
    D) perfect competition

    Ans: D Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Characteristics of perfect competition Type: Application

12. Which of the following industries most closely approximates perfect competition?
    A) agriculture
    B) farm implements
    C) clothing
    D) steel

    Ans: A Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Characteristics of perfect competition Type: Application

13. The production of agricultural products such as wheat or corn would best be described by:
    A) monopolistic competition
    B) perfect competition
    C) monopoly
    D) oligopoly

    Ans: B Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Characteristics of perfect competition Type: Application

14. Which is a reason why there is no advertising by individual firms under perfect competition?
    A) Firms produce a homogeneous product.
    B) The quantity of the product demanded is very large.
    C) The market demand curve cannot be increased.
    D) Firms do not make long-run profits.

    Ans: A Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165
    Subtopic: Characteristics of perfect competition Type: Application

15. Which idea is inconsistent with perfect competition?
    A) short-run losses
    B) product differentiation
    C) freedom of entry or exit for firms
    D) a large number of buyers and sellers

    Ans: B Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165
    Subtopic: Characteristics of perfect competition Type: Definition

16. A perfectly competitive firm does not try to sell more of its product by lowering its price below the market price because:
    A) its competitors would not permit it.
    B) it can sell all it wants to at the market price.
    C) this would be considered unethical.
    D) its demand curve is inelastic, so total revenue will decline.

    Ans: B Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Characteristics of perfect competition Type: Application

17. Which characteristic would best be associated with perfect competition?
    A) few sellers
    B) price taker
    C) nonprice competition
    D) product differentiation

    Ans: B Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Characteristics of perfect competition Type: Definition

18. Which of the following statements applies to a perfectly competitive producer?
    A) It will not advertise its product.
    B) In long-run equilibrium it will earn an economic profit.
    C) Its product will have a brand name.
    D) Its product is slightly different from those of its competitors.

    Ans: A Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165
    Subtopic: Characteristics of perfect competition Type: Application

19. A perfectly competitive seller is:
    A) both a "price maker" and a "price taker."
    B) neither a "price maker" nor a "price taker."
    C) a "price taker."
    D) a "price maker."

    Ans: C Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Characteristics of perfect competition
    Type: Application

20. Which of the following is not characteristic of perfect competition?
    A) price strategies by firms
    B) a standardized product
    C) no barriers to entry
    D) a larger number of sellers

    Ans: A Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Characteristics of perfect competition
    Type: Application

21. Which of the following is not a basic characteristic of perfect competition?
    A) considerable nonprice competition
    B) no barriers to the entry or exodus of firms
    C) a standardized or homogeneous product
    D) a large number of buyers and sellers

    Ans: A Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165
    Subtopic: Characteristics of perfect competition Type: Application

22. A perfectly competitive firm does not try to sell more of its product by lowering its price below the market price because:
    A) its competitors would not permit it.
    B) it can sell all it wants to at the market price.
    C) this would be considered unethical price setting.
    D) its demand curve is inelastic, so total revenue will decline.

    Ans: B Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165
    Subtopic: Characteristics of perfect competition Type: Application

23. Price is constant or "given" to the individual firm selling in a perfectly competitive market because:
    A) the firm's demand curve is downward sloping.
    B) there are no good substitutes for the firm's product.
    C) each seller supplies a negligible fraction of total supply.
    D) product differentiation is reinforced by extensive advertising.

    Ans: C Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165
    Subtopic: Characteristics of perfect competition Type: Application

24. Sam owns a firm that produces tomatoes in a perfectly competitive market. The firm's demand curve is:
    A) a vertical line.
    B) a horizontal line.
    C) upward sloping to the right.
    D) downward sloping to the right.

    Ans: B Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Demand for a firm in perfect competition Type: Application

25. The demand schedule or curve confronted by the individual perfectly competitive firm is:
    A) relatively elastic, that is, the elasticity coefficient is greater than unity.
    B) perfectly elastic.
    C) relatively inelastic, that is, the elasticity coefficient is less than unity.
    D) perfectly inelastic.

    Ans: B Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Demand for a firm in perfect competition Type: Application

26. In perfect competition, the demand for the product of a single firm is perfectly:
    A) elastic because the firm produces a unique product.
    B) inelastic because the firm produces a unique product.
    C) elastic because many other firms produce the same product.
    D) inelastic because many other firms produce the same product.

    Ans: C Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Demand for a firm in perfect competition Type: Application

27. In perfect competition, the demand for the product of a single firm is:
    A) between zero and one.
    B) perfectly inelastic.
    C) perfectly elastic.
    D) greater than one.

    Ans: C Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Demand for a firm in perfect competition Type: Application

28. A perfectly elastic demand curve implies that the firm:
    A) must lower price to sell more output.
    B) can sell as much output as it chooses at the existing price.
    C) realizes an increase in total revenue which is less than product price when it sells an extra unit.
    D) is selling a differentiated (heterogeneous) product.

    Ans: B Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Demand for a firm in perfect competition Type: Application

29. If the demand curve facing a firm is perfectly elastic, then:
    A) its marginal revenue will equal price.
    B) its marginal revenue schedule will decrease at an increasing rate.
    C) its marginal revenue schedule decreases twice as fast as the demand curve.
    D) it can increase its total revenue by lowering the price of its product.

    Ans: A Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Demand for a firm in perfect competition Type: Application

30. A single firm in perfect competition in the short run has a:
    A) vertical supply curve.
    B) vertical demand curve.
    C) horizontal supply curve.
    D) horizontal demand curve.

    Ans: D Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Demand for a firm in perfect competition Type: Application

31. The demand curve of a perfectly competitive firm is:
    A) perfectly elastic.
    B) perfectly inelastic.
    C) elastic but not perfectly elastic.
    D) inelastic but not perfectly inelastic.

    Ans: A Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Demand for a firm in perfect competition Type: Application

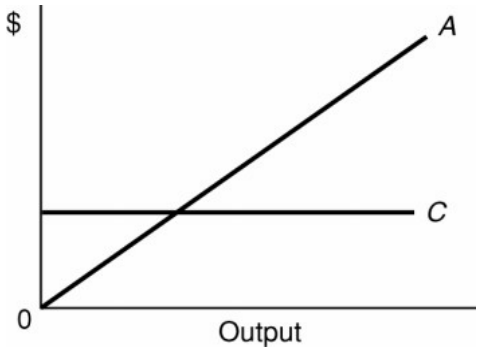
32. For a perfectly competitive firm total revenue:
    A) is price times quantity sold.
    B) increases by a constant absolute amount as output expands.
    C) graphs as a straight upward sloping line from the origin.
    D) has all of the above characteristics.

    Ans: D Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165
    Subtopic: Average, total, and marginal revenue Type: Application

33. The vertical distance between the horizontal axis and any point on a perfectly competitive firm's demand curve measures:
    A) total revenue.
    B) total cost.
    C) product price, marginal revenue, and average revenue.
    D) the quantity demanded.

    Ans: C Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Subtopic: Average, total, and marginal revenue Type: Application

Use the following to answer questions 34-35:



34. Refer to the diagram above which pertains to a perfectly competitive firm. Curve A represents:
    A) total revenue and marginal revenue.
    B) marginal revenue only.
    C) total revenue and average revenue.
    D) total revenue only.

    Ans: D Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Graphic

35. Refer to the diagram above which pertains to a perfectly competitive firm. Curve C represents:
    A) total revenue and marginal revenue.
    B) marginal revenue only.
    C) total revenue and average revenue.
    D) average revenue and marginal revenue.

    Ans: D Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Graphic

36. Which of the following is characteristic of a perfectly competitive seller's demand curve?
    A) Price and marginal revenue are equal at all levels of output.
    B) Average revenue is less than price.
    C) Its elasticity is "1" at all levels of output.
    D) It is the same as the market demand curve.

    Ans: A Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

37. Total revenue for producing 8 units of output is $48. Total revenue for producing 9 units of output is $63. Given this information, the:
    A) average revenue for producing 9 units is $1.
    B) average revenue for producing 9 units is $15.
    C) marginal revenue for producing the ninth unit is $1.
    D) marginal revenue for producing the ninth unit is $15.

    Ans: D Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

38. A perfectly competitive seller's average revenue curve coincides with:
    A) its marginal revenue curve only.
    B) its demand curve only.
    C) both its demand and marginal revenue curves.
    D) neither its demand nor its marginal revenue curve.

    Ans: C Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

39. Average revenue is:
    A) total revenue minus total cost.
    B) marginal revenue minus marginal cost.
    C) marginal revenue divided by the quantity of output.
    D) total revenue divided by the quantity of output.

    Ans: D Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

40. In perfect competition, the average revenue of a firm always equals:
    A) marginal cost.
    B) average total cost.
    C) marginal revenue.
    D) total revenue.

    Ans: C Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

    Use the following to answer questions 41-43:

    Assume a graph in which dollars are measured on the vertical axis and output on the horizontal axis.

41. Refer to the information provided. For a perfectly competitive firm total revenue:
    A) graphs as a straight, upward sloping line.
    B) is a straight line, parallel to the vertical axis.
    C) is a straight line, parallel to the horizontal axis.
    D) graphs as a straight, downward sloping line.

    Ans: A Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Graphic

42. Refer to the information provided. For a perfectly competitive firm marginal revenue:
    A) graphs as a straight, upward sloping line.
    B) is a straight line, parallel to the vertical axis.
    C) is a straight line, parallel to the horizontal axis.
    D) graphs as a straight, downward sloping line.

    Ans: C Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Graphic

43. Refer to the information provided. For a perfectly competitive firm:
    A) marginal revenue will graph as an upward sloping line.
    B) the demand curve will lie above the marginal revenue curve.
    C) the marginal revenue curve will lie above the demand curve.
    D) the demand and marginal revenue curves will coincide.

    Ans: D Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Graphic

44. If a firm in a perfectly competitive industry is confronted with an equilibrium price of $5, its marginal revenue:
    A) may be either greater or less than $5.
    B) will also be $5.
    C) will be less than $5.
    D) will be greater than $5.

    Ans: B Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

45. For a perfectly competitive seller, price equals:
    A) average revenue.
    B) marginal revenue.
    C) total revenue divided by output.
    D) all of the above.

    Ans: D Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

46. The marginal revenue curve of a perfectly competitive firm:
    A) lies below the firm's demand curve.
    B) increases at an increasing rate as output expands.
    C) is horizontal at the market price.
    D) is downward sloping because price must be reduced to sell more output.

    Ans: C Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

47. The fact that a perfectly competitive firm's total revenue curve is linear and upward sloping to the right implies that:
    A) product price increases as output increases.
    B) product price decreases as output increases.
    C) product price is constant at all levels of output.
    D) marginal revenue declines as more output is produced.

    Ans: C Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

48. Marginal revenue is the:
    A) change in product price associated with the sale of one more unit of output.
    B) change in average revenue associated with the sale of one more unit of output.
    C) difference between product price and average total cost.
    D) change in total revenue associated with the sale of one more unit of output.

    Ans: D Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Definition

49. Marginal revenue for a perfectly competitive firm:
    A) is greater than price.
    B) is less than price.
    C) is equal to price.
    D) may be either greater or less than price.

    Ans: C Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

50. Refer to the data. This firm is selling its output in a(n):

Output	Marginal revenue	Marginal cost
0	--	--
1	$16	$10
2	16	9
3	16	13
4	16	17
5	16	21

    A) imperfectly competitive market.
    B) monopolistic market.
    C) perfectly competitive market.
    D) oligopolistic market.

    Ans: C Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

51. In perfect competition, the marginal revenue of a firm always equals:
    A) product price.
    B) total revenue.
    C) average total cost.
    D) marginal cost.

    Ans: A Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

52. In perfect competition, marginal revenue is:
    A) equal to total revenue.
    B) equal to product price.
    C) less than product price.
    D) greater than product price.

    Ans: B Level: Moderate Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166
    Subtopic: Average, total, and marginal revenue Type: Application

53. Firms seek to maximize:
    A) per unit profit.
    B) total revenue.
    C) total profit.
    D) market share.

    Ans: C Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 167 Subtopic: Total-Revenue-Total-Cost-approach Type: Application

54. When a firm is maximizing profit it will necessarily be:
    A) maximizing profit per unit of output.
    B) maximizing the difference between total revenue and total cost.
    C) minimizing total cost.
    D) maximizing total revenue.

    Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Application

55. A firm reaches a break-even point (firm makes normal profit) where:
    A) marginal revenue cuts the horizontal axis.
    B) marginal cost intersects the average variable cost curve.
    C) total revenue equals total variable cost.
    D) total revenue and total cost are equal.

    Ans: D Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Definition

56. In the short run a perfectly competitive firm which seeks to maximize profit will produce:
    A) where the demand and the ATC curves intersect.
    B) where total revenue exceeds total cost by the maximum amount.
    C) that output where economic profits are zero.
    D) at any point where the total revenue and total cost curves intersect.

    Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Application

57. In a typical graph for a perfectly competitive firm, the intersection of the total cost and total revenue curves would be:
    A) a point of maximum economic profit.
    B) a point of minimum economic loss.
    C) a point where MR = MC.
    D) a break-even point.

    Ans: D Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

58. A competitive firm will maximize profits at that output at which:
    A) total revenue exceeds total cost by the greatest amount.
    B) total revenue and total cost are equal.
    C) price exceeds average total cost by the largest amount.
    D) the difference between marginal revenue and price is at a maximum.

    Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Application

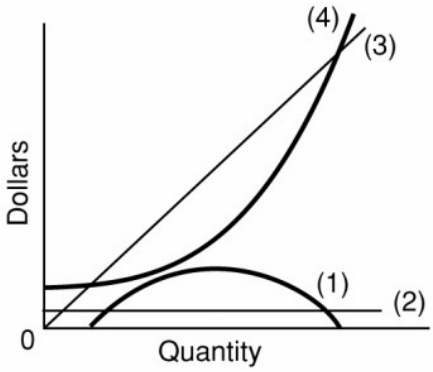
59. In the short run a perfectly competitive firm will maximize profit by producing that output at which:
    A) total revenue exceeds total cost by a maximum amount.
    B) total revenue exceeds total cost by a minimum amount.
    C) total revenue and total cost are equal.
    D) total fixed cost equals total variable cost.

    Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Application

60. The principle that a firm should produce up to the point where the marginal revenue from the sale of an extra unit of output is equal to the marginal cost of producing it is known as the:
    A) output-maximizing rule.
    B) profit-maximizing rule.
    C) shut-down rule.
    D) break-even rule.

    Ans: B Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Definition

Use the following to answer questions 61-62:



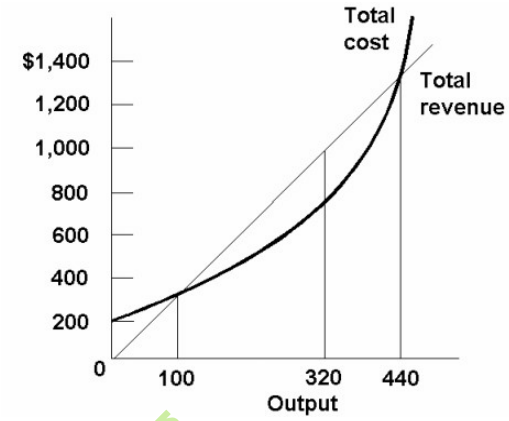
61. Refer to the diagram above. Other things equal, an increase of product price would be shown as:
    A) an increase in the steepness of curves (3), an upward shift in curve (2), and upward shift in curve (1).
    B) a decrease in the steepness of curve (3), a downward shift in curve (2), and an upward shift in curve (1).
    C) an downward shift in curve (4) and an upward shift in curve (1), with no changes in lines (2) and (3).
    D) an upward shift in line (2) only.

    Ans: A Level: Difficult Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

62. The firm represented by the diagram above would maximize its profit where:
    A) curves (2) and (1) intersect.
    B) curve (1) touches the horizontal axis for the second time.
    C) the vertical distance between curves (3) and (4) is the greatest.
    D) curves (3) and (4) intersect.

    Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

Use the following to answer questions 63-66:



63. Refer to the short-run data above. Total fixed cost for this firm:
A)is about $67. B) is $300.
C) is $200.
D) is $100.

Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

64. Refer to the short-run data above. The shape of the total cost curve reflects:
A) diminishing opportunity costs.
B) the law of rising fixed costs.
C) increasing and diminishing returns.
D) economies and diseconomies of scale.

Ans: C Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

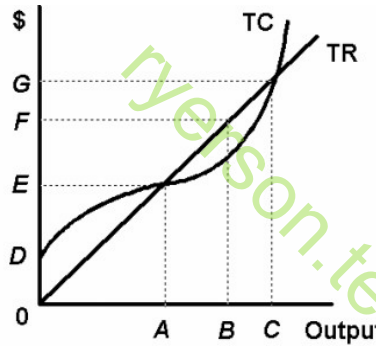
65. Refer to the short-run data above. The profit-maximizing output for this firm is:
A) above 440 units.
B) 440 units.
C) 320 units.
D) 100 units.

Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

66. Refer to the short-run data above. Which of the following is correct?
    A) This firm will maximize its profit at 440 units of output.
    B) Any level of output between 100 and 440 units will yield an economic profit.
    C) This firm's marginal revenue rises with output.
    D) Any level of output less than 100 units or greater than 440 units is profitable.

    Ans: B Level: Difficult Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

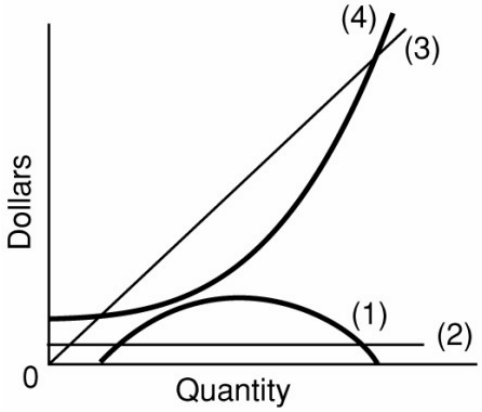
67. Refer to the graph for a perfectly competitive firm in short-run equilibrium. The price being charged by the firm is given by:



    A) 0F/0C.
    B) 0G/0C.
    C) 0F/0B.
    D) 0E/0A.

    Ans: C Level: Difficult Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

    Use the following to answer questions 68-71:



68. Curve (1) in the diagram above is a perfectly competitive firm's:
    A) total cost curve.
    B) total revenue curve.
    C) marginal revenue curve
    D) total economic profit curve.

    Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

69. Curve (2) in the diagram above is a perfectly competitive firm's
    A) total cost curve.
    B) total revenue curve.
    C) marginal revenue curve
    D) total economic profit curve.

    Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

70. Curve (3) in the diagram above is a perfectly competitive firm's
    A) total cost curve.
    B) total revenue curve.
    C) marginal revenue curve.
    D) total economic profit curve.

    Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

71. Curve (4) in the diagram above is a perfectly competitive firm's:
    A) total cost curve.
    B) total revenue curve.
    C) marginal revenue curve.
    D) total profit curve.

    Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

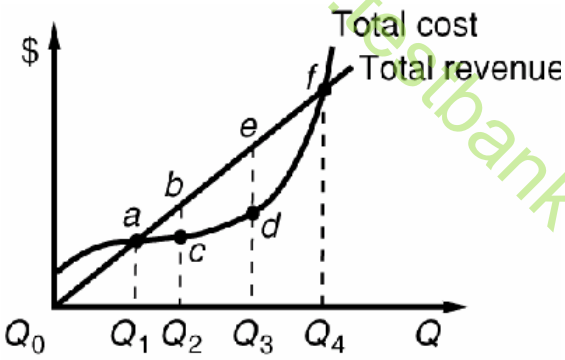
72. Answer the question based on the table below.

Price	Quantity	TFC	TVC
$5	5	$25	$10
5	10	25	20
5	15	25	50
5	20	25	60

At what point on the table would a perfectly competitive firm just cover all of its costs?
A) Q = 5
B) Q = 10
C) Q = 15
D) Q = 20

Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Calculation

Use the following to answer questions 73-74:



73. Refer to the graph above. Which of the output levels is the profit-maximizing output level for this firm?
A) Q_1
B) Q_2
C) Q_3
D) Q_4

Ans: C Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

74. Refer to the graph above. The amount of profit is measured by the difference between:
    A) a and c
    B) b and c
    C) c and a
    D) dand e

    Ans: D Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

75. In a typical graph for a perfectly competitive firm, where the total cost and total revenue curves intersect there is a(n):
    A) economic profit.
    B) normal profit.
    C) economic loss.
    D) zero level of output.

    Ans: B Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Graphic

76. In the short run, fixed costs for a profitable firm are:
    A) zero.
    B) negative.
    C) important determinants of the output level.
    D) irrelevant in determining the optimal level of output.

    Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Application

    Use the following to answer questions 77-80:

    The following cost data is for a perfectly competitive seller:

Total product	Total fixed cost	Total variable cost	Total cost
0	$50	$ 0	$ 50
1	50	70	120
2	50	120	170
3	50	150	200
4	50	220	270
5	50	300	350
6	50	390	440

77. The data above are for:
    A) the long run.
    B) the short run.
    C) both the short run and the long run.
    D) the intermediate market period only.

    Ans: B Level: Easy Main Topic: 7.3 Profit maximization in the short run Page: 167-168 Subtopic: Total-Revenue-Total-Cost-approach Type: Application

78. Refer to the data above. The marginal cost of the fifth unit of output:
    A) is $80.
    B) is $90.
    C) is $50.
    D) is $20.

    Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run Page: 168 Subtopic: Marginal-Revenue-Marginal-Cost approach Type: Calculation

79. Refer to the data above. If product price is $75, the firm will:
    A) produce 3 units of output.
    B) produce 4 units of output.
    C) produce 5 units of output.
    D) produce 6 units of output.

    Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run Page: 168 Subtopic: Marginal-Revenue-Marginal-Cost approach Type: Calculation

80. Refer to the data above. Given the $75 product price, at its optimal output the firm will:
    A) realize a $25 economic profit.
    B) realize a $30 economic profit.
    C) realize a $25 loss.
    D) realize a $30 loss.

    Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run Page: 168 Subtopic: Marginal-Revenue-Marginal-Cost approach Type: Calculation

81. In the short run, a perfectly competitive firm will earn a normal profit when:
    A) P = AVC.
    B) P > MC.
    C) that firm's MR = market equilibrium price.
    D) P = ATC.

    Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 168 Subtopic: Marginal-Revenue-Marginal-Cost approach Type: Formula

82. A firm should increase the quantity of output as long as its:
    A) marginal revenue is greater than its marginal cost.
    B) marginal cost is greater than its marginal revenue.
    C) average revenue is greater than its average total cost.
    D) average revenue is greater than its average variable cost.

    Ans: A Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 168 Subtopic: Marginal-Revenue-Marginal-Cost approach
    Type: Application

83. A competitive firm in the short run can determine the profit-maximizing (or loss-minimizing) output by equating:
    A) price and average total cost.
    B) price and average fixed cost.
    C) marginal revenue and marginal cost.
    D) price and marginal revenue.

    Ans: C Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 168 Subtopic: Marginal-Revenue-Marginal-Cost approach
    Type: Application

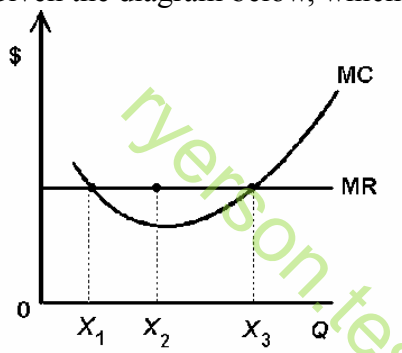
84. The MR = MC rule applies:
    A) to firms in all types of industries.
    B) only when the firm is a "price taker."
    C) only to monopolies.
    D) only to perfectly competitive firms.

    Ans: A Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 168 Subtopic: Marginal-Revenue-Marginal-Cost approach
    Type: Application

85. The MR = MC rule applies:
    A) in the short run, but not in the long run.
    B) in the long run, but not in the short run.
    C) in both the short run and the long run.
    D) only to a perfectly competitive firm.

    Ans: C Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 168 Subtopic: Marginal-Revenue-Marginal-Cost approach
    Type: Application

86. Given the diagram below, which level of output should the entrepreneur choose?



    A) either X_1 or X_3 since the profit level will be the same
    B) X_3 since any increase in output will reduce profits
    C) X_1 since any decrease in output will reduce profits
    D) X_2 since at this level the difference between MR and MC is maximized

    Ans: B Level: Easy Main Topic: 7.3 Profit maximization in the short run
    Page: 170 Subtopic: Marginal-Revenue-Marginal-Cost approach Type: Graphic

87. The MR = MC rule can be restated for a perfectly competitive seller as P = MC because:
    A) each additional unit of output adds exactly its price to total revenue.
    B) the firm's average revenue curve is downward sloping.
    C) the market demand curve is downward sloping.
    D) the firm's marginal revenue and total revenue curves will coincide.

    Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
    Page: 170 Subtopic: Marginal-Revenue-Marginal-Cost approach
    Type: Application

88. Refer to the data below. At 5 units of output average fixed cost, average variable cost, and average total cost are:

The following cost data is for a perfectly competitive seller:

Total product	Total fixed cost	Total variable cost	Total cost
0	$50	$ 0	$ 50
1	50	70	120
2	50	120	170
3	50	150	200
4	50	220	270
5	50	300	350
6	50	390	440

A) $10, $60, and $70 respectively.
B) $50, $40, and $90 respectively.
C) $10, $70, and $80 respectively.
D) $5, $25, and $30 respectively.

Ans: A Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

89. Assume the XYZ Corporation is producing 20 units of output. It is selling this output in a perfectly competitive market at $10 per unit. Its total fixed costs are $100 and its average variable cost is $3 at 20 units of output. This corporation:
A) should close down in the short run.
B) is maximizing its profits.
C) is realizing a loss of $60.
D) is realizing an economic profit of $40.

Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

90. Refer to the table. If the product sells for $1,200 a unit, the firm's profit-maximizing output is:

The table shows the total costs for a perfectly competitive firm.

Output	Totalcost
0	$2,500
1	2,700
2	3,100
3	3,700
4	4,500
5	6,000

A) 4.
B) 3.
C) 2.
D) 5.

Ans: A Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

91. Refer to the data. At the profit-maximizing output the firm's total revenue is:

Output	Marginal revenue	Marginal cost
0	--	--
1	$16	$10
2	16	9
3	16	13
4	16	17
5	16	21

A) $48.
B) $32.
C) $80.
D) $64.

Ans: A Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

92. Refer to the table. The market price of the product is:

The table below is for a perfectly competitive firm.

Output	Totalrevenue	Totalcost
0	$ 0	$ 50
1	40	74
2	80	94
3	120	117
4	160	142
5	200	172

A) $40.
B) $80.
C) $120.
D) $160.

Ans: A Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

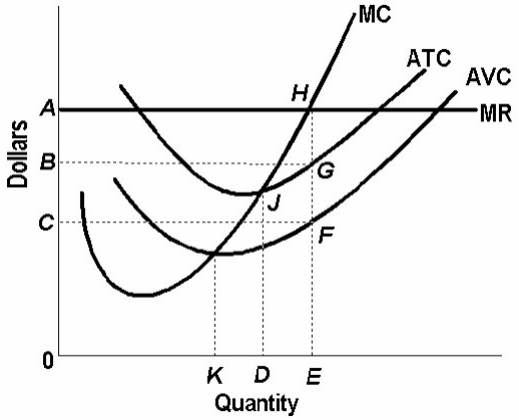
93. On a per unit basis economic profit can be determined as the difference between:
A) marginal revenue and product price.
B) product price and average total cost.
C) marginal revenue and marginal cost.
D) average fixed cost and product price.

Ans: B Level: Easy Main Topic: 7.3 Profit maximization in the short run Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach Type: Application

94. Assume a perfectly competitive firm is selling 200 units of output at $3 each. At this output its total fixed cost is $100 and its total variable cost is $350. This firm:
A) is maximizing its profit.
B) is making a profit, but not necessarily the maximum profit.
C) is incurring losses.
D) should shut down in the short run.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

95. Refer to the diagram. To maximize profit or minimize losses this firm will produce:



A) K units at price C.
B) D units at price J.
C) E units at price B.
D) E units at price A.

Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

96. A perfectly competitive seller should produce (rather than shut down) in the short run:
A) only if total revenue exceeds total cost.
B) only if total cost exceeds total revenue.
C) if total revenue exceeds total cost or if total cost exceeds total revenue by some amount less than total fixed cost.
D) if total cost exceeds total revenue by some amount greater than total fixed cost.

Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

97. Assume the price of a product sold by a perfectly competitive firm is $5. Given the data in the accompanying table, at what output is total profit highest in the short run?

Output	Tot al cost
20	$ 70
25	75
30	85
35	100
40	125
45	155
50	190

A) 40
B) 30
C) 20
D) 50

Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

98. Given the table below, what is the short-run profit-maximizing level of output for the firm?

Output	Total revenue	Total cost
1	$ 4	$ 2
2	8	3
3	12	6
4	16	9
5	20	14

A) 2 units
B) 4 units
C) 3 units
D) 1 unit

Ans: B Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

Use the following to answer questions 99-100:

Output	Marginal revenue	Marginal cost
0	--	--
1	$16	$10
2	16	9
3	16	13
4	16	17
5	16	21

99. Refer to the data above. At the profit-maximizing output the firm's total cost is:
A) $48.
B) $32.
C) $80.
D) $64.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach

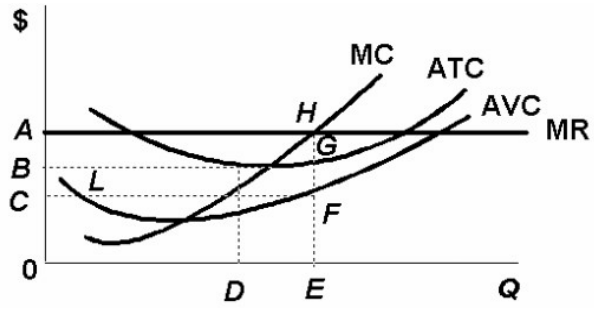
100. Refer to the data above. The firm's:
A) economic profit is $12.
B) economic profit is $16.
C) loss is $14.
D) economic profit is $3.

Ans: B Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

101. In the short run a perfectly competitive firm will always make an economic profit if:
A) P = ATC.
B) P > AVC.
C) P = MC.
D) P > ATC.

Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Formula

102. Using the diagram below, in order to maximize profits, this firm would produce _____which would result in _____.



A) 0D units, a loss equal to ABGH
B) 0E units, a loss equal to ALFH
C) 0D units, economic profits equal to BCFG
D) 0E units, economic profits equal to ABGH

Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

103. A perfectly competitive firm is in short-run equilibrium and its MC exceeds its ATC. It can be concluded that:
A) firms will leave the industry in the long run.
B) the firm is realizing an economic profit.
C) the firm is realizing a loss.
D) this is an increasing-cost industry.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

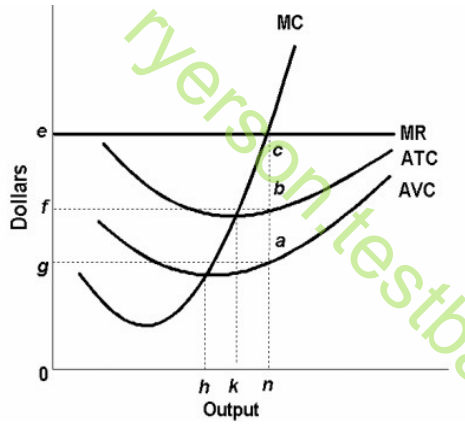
104. The Campus Crustacean Company receives $2 per box for its crawfish and is selling 1,600 boxes to maximize its profits. What is the per unit profit on a box of crawfish at the profit-maximizing level of output if the variable cost is $1 per box and fixed costs are $1,200?
A) $.25.
B) $.50.
C) $1.00.
D) $1.25.

Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

105. If a perfectly competitive firm is producing at some level less than the profit-maximizing output, then:
A) price is necessarily greater than average total cost.
B) fixed costs are large relative to variable costs.
C) price exceeds marginal revenue.
D) marginal revenue exceeds marginal cost.

Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

Use the following to answer questions 106-109:



106. Refer to the diagram above. The profit-maximizing output:
A) is n.
B) is k.
C) is h.
D) cannot be determined from the information given.

Ans: A Level: Easy Main Topic: 7.3 Profit maximization in the short run Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach Type: Graphic

107. Refer to the diagram above. At the profit-maximizing output, average variable cost is:
A) ef.
B) fg.
C) na.
D) ac.

Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

108. Refer to the diagram above. At the profit-maximizing output, total profit is:
A) efbc.
B) fgab.
C) egac.
D) 0fbn.

Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

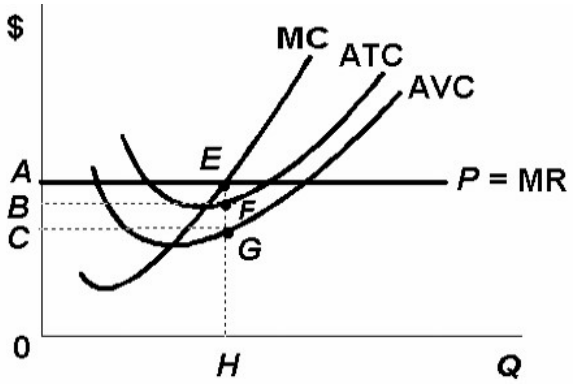
109. Refer to the diagram above. For any level of output, total fixed cost:
A) is fgab.
B) is 0gan.
C) is ba.
D) is efbc.

Ans: A Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

110. If a perfectly competitive firm is producing at the P = MC output and realizing an economic profit, at that output:
A) marginal revenue is less than price.
B) marginal revenue exceeds ATC.
C) ATC is being minimized.
D) total revenue equals total cost.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

111. In the graph below, the area:



A) 0CGH represents the firm's total cost.
B) ACGE represents the firm's total profit.
C) 0AEH represents the firm's total profit.
D) BCGF represents the firm's fixed costs of production.

Ans: D Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

Use the following to answer questions 112-113:

The following cost data is for a perfectly competitive seller:

Output	Total cost
0	$ 50
1	90
2	120
3	140
4	170
5	210
6	260
7	330

112. Refer to the data above. If product price is $60, the firm will:
A) shut down.
B) produce 6 units and realize a $100 economic profit.
C) produce 4 units and realize a $120 economic profit.
D) produce 3 units and realize a $40 loss.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

113. Refer to the data above. If product price is $45, the firm will:
A) shut down.
B) produce 4 units and realize a $120 economic profit.
C) produce 5 units and realize a $15 economic profit.
D) produce 6 units and realize a $100 economic profit.

Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

114. Which of the following is not a valid generalization concerning the relationship between price and costs for a perfectly competitive seller in the short run?
A) Price must be at least equal to average total cost.
B) Price times quantity produced must be equal to or greater than total variable cost for some level of output or the firm will close down in the short run.
C) Price may be equal to, greater than, or less than average total cost.
D) Price must be equal to or greater than minimum average variable cost for the firm to continue producing.

Ans: A Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

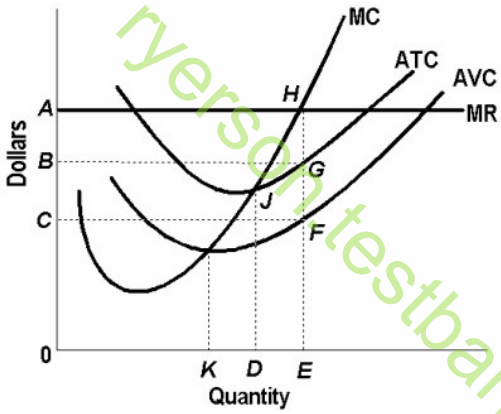
115. When a firm produces less output, it can reduce:
A) its fixed costs but not its variable costs.
B) its variable costs but not its fixed costs.
C) average fixed cost.
D) marginal revenue.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

116. A perfectly competitive firm is producing at the point where its marginal cost equals the price of its product. If the firm increases its output, then total revenue will:
A) increase and profits will increase.
B) decrease and profits will increase.
C) increase and profits will decrease.
D) decrease and profits will decrease.

Ans: C Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

Use the following to answer questions 117-120:



117. Refer to the diagram above. At the profit-maximizing output, total revenue will be:
A) 0AHE.
B) 0BGE.
C) 0CFE.
D) ABGE.

Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

118. Refer to the diagram above. At the profit-maximizing output, total fixed cost is equal to:
A) 0AHE.
B) 0BGE.
C) 0CFE.
D) BCFG.

Ans: D Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

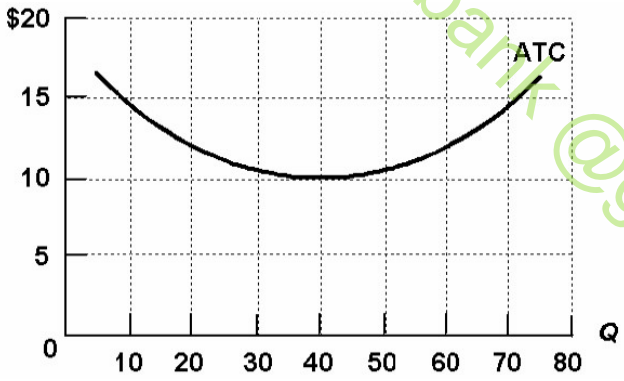
119. Refer to the diagram above. At the profit-maximizing output, total variable cost is equal to:
A) 0AHE.
B) 0CFE.
C) 0BGE.
D) ABGH.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Profit-maximizing case Type: Graphic

120. Refer to the diagram above. At the profit-maximizing output, the firm will realize:
A) a loss equal to BCFG.
B) a loss equal to ACFH.
C) an economic profit of ACFH.
D) an economic profit of ABGH.

Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

Use the following to answer questions 121-123:



121. Refer to the diagram above showing the average total cost curve for a perfectly competitive firm. Suppose this firm is maximizing its total profit and the market price is $15. The firm's per unit profit is:
A) $5.
B) $200.
C) a positive amount less than $5.
D) a positive amount more than $200.

Ans: C Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

122. Refer to the diagram above showing the average total cost curve for a perfectly competitive firm. Suppose that total variable cost is $300 at 40 units of output. At that level of output, average fixed cost:
A) is $2.50.
B) is $4.
C) is $100.
D) cannot be determined from the information provided.

Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

123. Refer to the diagram above showing the average total cost curve for a perfectly competitive firm. Suppose that average variable cost is $8 at 40 units of output. At that level of output, total fixed cost:
A) is $2.
B) is $40.
C) is $80.
D) cannot be determined from the information provided.

Ans: C Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

124. Suppose that when 3000 units of output are produced, the marginal cost of the 3001st unit is $2. This amount is equal to the minimum of average total cost, and marginal cost is rising. If the optimal level of output in the short run is 3300 units, then at this higher level of output marginal cost is:
A) equal to $2 and marginal cost is equal to average total cost.
B) less than $2 and marginal cost is greater than average total cost.
C) greater than $2 and marginal cost is less than average total cost.
D) greater than $2 and marginal cost is greater than average total cost.

Ans: D Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

125. Let us suppose Harry's, a local supplier of chili and beer, has the following revenue and cost structure:

Total revenue	$3,000 per week
Total variable cost	$2,000 per week
Total fixed costs	$2,000 per week

A) Harry's should stay open in the short run.
B) Harry's should shut down in the short run.
C) Harry's should stay open in the long run.
D) Harry's should shut down in the short run but reopen in the long run.

Ans: A Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 181 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

126. Refer to the data below. If the firm's minimum average variable cost is $10, the firm's profit-maximizing level of output would be:

Output	Marginal revenue	Marginal cost
0	--	--
1	$16	$10
2	16	9
3	16	13
4	16	17
5	16	21

A) 2.
B) 3.
C) 4.
D) 5.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

127. Suppose that at 500 units of output marginal revenue is equal to marginal cost. The firm is selling its output at $5 per unit and average total cost at 500 units of output is $6. On the basis of this information we:
A) can say that the firm should close down in the short run.
B) can say that the firm can produce and realize an economic profit in the short run.
C) cannot determine whether the firm should produce or shut down in the short run.
D) can assume the firm is not using the most efficient technology.

Ans: C Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

128. If a firm is confronted with economic losses in the short run, it will decide whether or not to produce by comparing:
A) marginal revenue and marginal cost.
B) price and minimum average variable cost.
C) total revenue and total cost.
D) total revenue and total fixed cost.

Ans: B Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

129. A firm finds that at its MR = MC output, its TC = $1000, TVC = $800, TFC = $200, and total revenue is $900. This firm should:
A) shut down in the short run.
B) produce because the resulting loss is less than its TFC.
C) produce because it will realize an economic profit.
D) liquidate its assets and go out of business.

Ans: B Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

130. A firm sells a product in a perfectly competitive market. The marginal cost of the product at the current output of 800 units is $3.50. The minimum possible average variable cost is $3.00. The market price of the product is $4.00. To maximize profit or minimize losses, the firm should:
A) continue producing 800 units.
B) produce more than 800 units.
C) produce less than 800 units.
D) shut down.

Ans: B Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

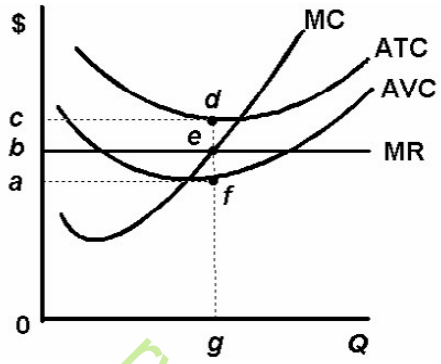
131. A firm sells a product in a perfectly competitive market. The marginal cost of the product at the current output of 500 units is $1.50. The minimum possible average variable cost is $1.00. The market price of the product is $1.25. To maximize profit or minimize losses, the firm should:
A) continue producing 500 units.
B) produce less than 500 units.
C) produce more than 500 units.
D) shut down.

Ans: B Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

132. DASH Airlines is considering the addition of a flight from Red Cloud to David City. The total cost of the flight would be $1100 of which fixed costs are $800. Expected revenues from the flight are $600. DASH should:
A) not add this flight because only flights which cover their full costs are profitable.
B) not add this flight because it is not profitable at the margin.
C) add this flight because the flight's expected revenue covers part of the fixed cost.
D) not add this flight because total costs exceed total revenue.

Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

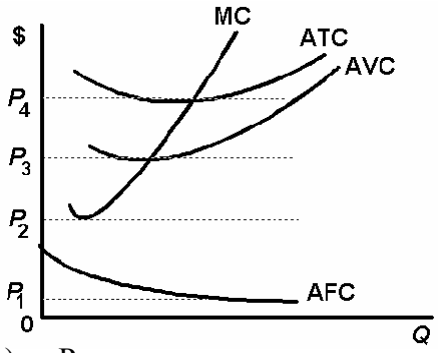
133. The graph below shows a profit-maximizing perfectly competitive firm operating in the short run. Which area in the graph represents the amount the firm can save by continuing to produce in the short run rather than closing down immediately?



A) 0beg
B) 0cdg
C) acdf
D) abef

Ans: D Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

134. Given the graph below showing short-run cost curves for a competitive firm, at what price would the firm face the same profit or loss whether it chooses to produce or not?



A) P_3
B) P_1
C) P_4
D) P_2

Ans: Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

135. Refer to the data below. If product price is $25, the firm will:

The following cost data is for a perfectly competitive seller:

Output	Total cost
0	$ 50
1	90
2	120
3	140
4	170
5	210
6	260
7	330

A) shut down and realize a $90 loss.
B) shut down and realize a $50 loss.
C) produce 3 units and realize a $65 loss.
D) produce 4 units and realize a $10 economic profit.

Ans: B Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

136. Assume for a competitive firm that MC = AVC at $12, MC = ATC at $20, and MC = MR at $16. This firm will:
A) realize a profit of $4 per unit of output.
B) maximize its profit by producing in the short run.
C) minimize its losses by producing in the short run.
D) shut down in the short run.

Ans: C Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

137. Candy Cane Corporation (CCC) produces 100,000 boxes of candy bars per year which sell for $3 a box. If variable costs are $2 per box, and it has $125,000 in fixed operating costs, in the short run the CCC should:
A) shut down as fixed costs are not being covered.
B) keep producing as profits are $25,000.
C) keep producing as all the variable costs and part of the fixed costs are paid.
D) reduce production until break-even point is reached.

Ans: C Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

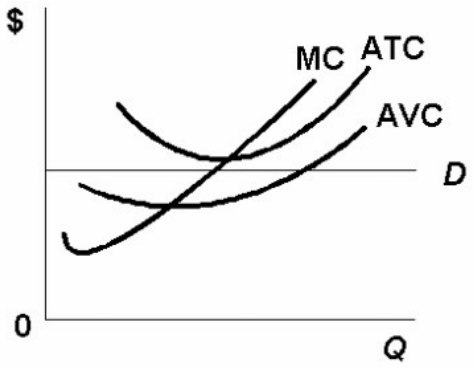
138. A firm should always continue to operate at a loss in the short run if:
A) the firm will show a profit.
B) the owner enjoys helping her customers.
C) the firm cannot produce any other products more profitably.
D) it can cover its variable costs and some of its fixed costs.

Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

139. A perfectly competitive firm will be willing to produce at a loss in the short run provided:
A) the loss is no greater than its total variable costs.
B) the loss is no greater than its total fixed costs.
C) the loss is no greater than its marginal cost.
D) price exceeds marginal costs.

Ans: B Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

140. The perfectly competitive firm below will:



A) shut down.
B) produce with short-run losses.
C) produce with long-run economic profits.
D) produce with short-run economic profits.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

141. If a perfectly competitive firm shut down in the short run:
A) its loss will be zero.
B) it will realize a loss equal to its total variable costs.
C) it will realize a loss equal to its total costs.
D) it will realize a loss equal to its total fixed costs.

Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

142. In the short run a perfectly competitive seller will shut down if:
A) it cannot produce at an economic profit.
B) price is less than average variable cost at all outputs.
C) price is less than average fixed cost at all outputs.
D) there is no point at which marginal revenue and marginal cost are equal.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

143. If at the MC = MR output, AVC exceeds price:
A) new firms will enter this industry.
B) the firm should shut down in the short run
C) the firm should produce the MC = MR output and realize an economic profit.
D) the firm should expand its plant.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

144. In the short run a perfectly competitive seller will close down if product price:
A) equals average revenue.
B) is greater than MC.
C) is less than AVC.
D) is less than ATC.

Ans: C Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

145. The short-run shut-down point for a perfectly competitive firm occurs:
A) at any point where price is less than the minimum AVC.
B) between the two break-even points.
C) at any point where total revenue is less than total cost.
D) at any point where the firm is not making an economic profit.

Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

146. The loss of a perfectly competitive firm which shuts down in the short run:
A) is equal to its total variable costs.
B) is zero.
C) is equal to its total fixed costs.
D) cannot be determined.

Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

147. If total revenue is less than total variable costs at the MR = MC output, a perfectly competitive firm should:
A) shut down.
B) produce, but will necessarily realize a loss.
C) produce and may or may not realize a profit.
D) increase its output.

Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

148. In the standard model of perfect competition, a profit-maximizing entrepreneur will shut down in the short run if:
A) marginal cost is greater than average revenue.
B) average cost is greater than average revenue.
C) average fixed cost is greater than average revenue.
D) total revenue is less than total variable costs.

Ans: D Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

149. Suppose you find that the price of your product is less than minimum AVC. You should:
A) minimize your losses by producing where P = MC.
B) maximize your profits by producing where P = MC.
C) close down because, by producing, your losses will exceed your total fixed costs.
D) close down because total revenue exceeds total variable cost.

Ans: C Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

150. A perfectly competitive firm should produce in the short run if its total revenue is sufficient to cover its:
A) total variable costs.
B) total costs.
C) total fixed costs.
D) marginal costs.

Ans: A Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

151. Refer to the table shown.

The table shows the total costs for a perfectly competitive firm.

Output	Totalcost
0	$2,500
1	2,700
2	3,100
3	3,700
4	4,500
5	6,000

If the firm shuts down in the short run, the total cost will be:
A) $200.
B) $2,500.
C) $2,700.
D) $1,500.

Ans: B Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Calculation

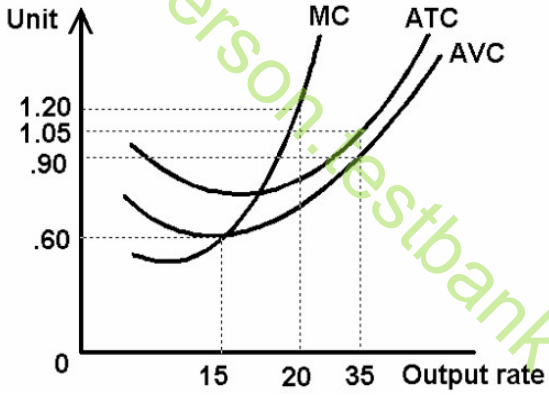
152. A firm sells a product in a perfectly competitive market. The marginal cost of the product at the current output of 200 units is $4.00. The minimum possible average variable cost is $3.50. The market price of the product is $3.00. To maximize profit or minimize losses, the firm should:
A) continue to produce 500 units.
B) produce less than 500 units.
C) produce more than 500 units.
D) shut down.

Ans: D Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

153. The Ajax Manufacturing Company is selling in a perfectly competitive market. Its output is 100 units which sell at $4 each. At this level of output total cost is $600, total fixed cost is $100, and marginal cost is $4. The firm should:
A) reduce output to about 80 units.
B) expand its production.
C) continue to produce 100 units.
D) produce zero units of output.

Ans: D Level: Diffcult Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Application

154. The diagram shows the cost curves for a competitive firm. If the market price falls to $.55, the optimal output is:



A) 0.
B) 15.
C) 20.
D) more than 20, but less than 35.

Ans: A Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 172-173 Subtopic: Marginal-Revenue-Marginal-Cost approach
Type: Graphic

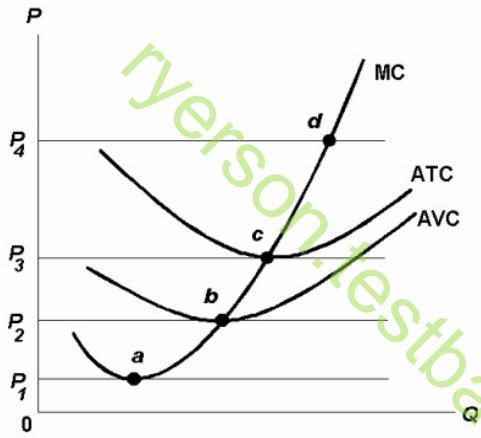
155. The individual firm's short-run supply curve is that part of its:
A) average total cost curve that is upward sloping.
B) average variable cost curve that is upward sloping.
C) marginal-cost curve lying above its average variable-cost curve.
D) marginal-cost curve lying above its average total-cost curve.

Ans: C Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Definition

156. In the short run the individual competitive firm's supply curve is that segment of the:
A) average variable cost curve lying below the marginal cost curve.
B) marginal cost curve lying above the average variable cost curve.
C) marginal revenue curve lying below the demand curve.
D) marginal cost curve lying between the average total cost and average variable cost curves.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Application

Use the following to answer questions 157-160:



157. Refer to the diagram above for a perfectly competitive producer. The firm will produce at a loss at all prices:
A) above P_1.
B) above P_3.
C) above P_4.
D) between P_2 and P_3.

Ans: D Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

158. Refer to the diagram above for a perfectly competitive producer. The firm's short-run supply curve is:
A) the abcd segment of the MC curve.
B) the bcd segment of the MC curve.
C) the cd segment of the MC curve.
D) not shown.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

159. Refer to the diagram above for a perfectly competitive producer. If product price is P_3:
A) the firm will maximize profit at point c.
B) the firm will cover the cost of production (explicit plus implicit costs).
C) economic profits will be zero.
D) all of the above are true.

Ans: D Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

160. Refer to the diagram above for a perfectly competitive producer. The lowest price at which the firm should produce (as opposed to shutting down):
A) is P_1.
B) is P_2.
C) is P_3.
D) is P_4.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

161. The short-run supply curve of a perfectly competitive producer is based on:
A) its AVC curve.
B) its ATC curve.
C) its AFC curve.
D) its MC curve.

Ans: D Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Application

162. A perfectly competitive firm's short-run supply curve is:
A) the upward sloping portion of its marginal cost curve.
B) the upward sloping portion of its average variable cost curve.
C) its marginal cost curve above minimum of its average variable cost.
D) its average total cost curve.

Ans: C Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Application

163. Consider the cost chart below for a perfectly competitive firm. The lowest output level on this firm's short-run supply curve is:

Output	Average variablecost	Average total cost	Marginal cost
10	5.00	15.00	3
12	4.00	13.00	4
14	4.75	11.50	6
16	5.75	9.00	9
20	9.00	12.00	14

A) 10.
B) 12.
C) 16.
D) 20.

Ans: B Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

164. A perfectly competitive firm's short-run supply curve is:
A) perfectly elastic at the minimum average total cost.
B) upward sloping and equal to the portion of the marginal cost curve which lies above the average variable cost curve.
C) upward sloping and equal to the portion of the marginal cost curve which lies above the average total cost curve.
D) upward sloping only when the industry has constant costs.

Ans: B Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Definition

165. The lowest point on a perfectly competitive firm's short-run supply curve corresponds to:
A) the minimum point on its ATC curve.
B) the minimum point on its AVC curve.
C) the minimum point on its AFC curve.
D) the minimum point on its MC curve.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Application

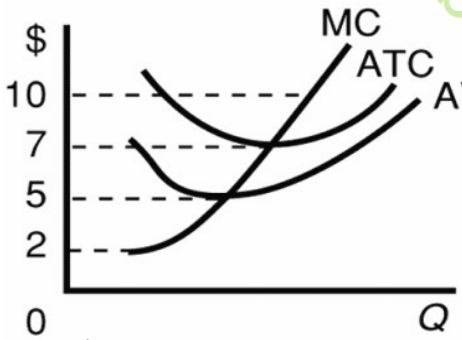
166. The short-run supply curve for a perfectly competitive industry can be found by:
   A) multiplying the AVC curve of the representative firm by the number of firms in the industry.
   B) adding horizontally the AVC curves of all firms.
   C) summing horizontally the segments of the MC curves lying above the AVC curve for all firms.
   D) adding horizontally the immediate market period supply curves of each firm.

   Ans: C Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
   Page: 175-176 Subtopic: Generalized depiction Type: Application

167. The short-run supply curve for a competitive firm is the:
   A) entire MC curve.
   B) segment of the MC curve lying above the AVC curve.
   C) segment of the MC curve lying below the AVC curve.
   D) segment of the AVC curve lying to the right of the MC curve.

   Ans: B Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
   Page: 175-176 Subtopic: Generalized depiction Type: Definition

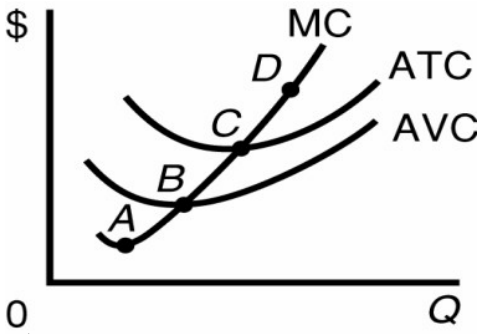
168. This competitive firm in the graph will not produce unless price at least equals to :



   A) $2.
   B) $5.
   C) $7.
   D) $10.

   Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
   Page: 175-176 Subtopic: Generalized depiction Type: Graphic

169. Which point is definitely not on a competitive firm's short-run supply curve?



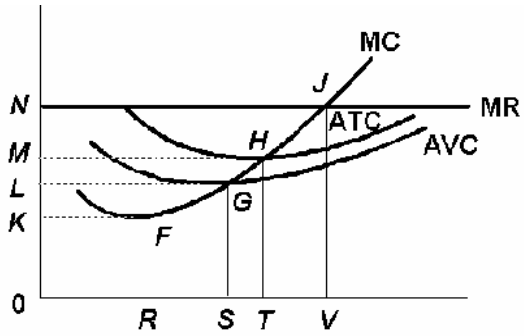
A) A
B) B
C) C
D) D

Ans: A Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

170. The profit-maximizing behaviour for a price-taking firm in short-run requires it to operate where:
A) P = TR = TC.
B) P = MC and at least = minimum of AVC.
C) P = MC = AFC.
D) P = MR = MC = AFC.

Ans: B Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Formula

171. Given the graph below, the competitive firm's supply curve is the:



A) MC curve above F.
B) MC curve above G.
C) MC curve above H.
D) MC curve above J.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

Use the following to answer questions 172-176:

The following cost data is for a firm which is selling in a perfectly competitive market:

Total product	Average fixed cost	Average variable cost	Average total cost	Marginal cost
1	$100.00	$17.00	$117.00	$17
2	50.00	16.00	66.00	15
3	33.33	15.00	47.33	13
4	25.00	14.25	39.25	12
5	20.00	14.00	34.00	13
6	16.67	14.00	30.67	14
7	14.29	15.71	30.00	26
8	12.50	17.50	30.00	30
9	11.11	19.44	30.55	35
10	10.00	21.60	31.60	41
11	9.09	24.00	33.09	48
12	7.33	26.67	35.00	56

172. Refer to the data above. If the market price for the firm's product is $12, the competitive firm will produce:
A) 4 units at a loss of $109.
B) 4 units at an economic profit of $31.75.
C) 8 units at a loss of $48.80.
D) zero units at a loss of $100.

Ans: D Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

173. Refer to the data above. If the market price for the firm's product is $32, the competitive firm will:
A) produce 8 units at an economic profit of $16.
B) produce 5 units at a loss of $10.
C) produce 8 units at a loss equal to the firm's total fixed cost.
D) produce 7 units at an economic profit of $41.50.

Ans: A Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

174. Refer to the data above. If the market price for the firm's product is $28, the competitive firm will:
A) produce 4 units at a loss of $17.40.
B) produce 7 units at a loss of $14.00.
C) close down in the short run.
D) produce 6 units at a loss of $23.80.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

175. Refer to the data above. Which of the following is the firm's short-run supply schedule?

(A)		(B)		(C)		(D)	
Price	Qs	Price	Qs	Price	Qs	Price	Qs
$50	12	$50	12	$50	11	$50	11
42	10	42	11	42	10	42	10
36	8	36	9	36	9	36	9
32	8	32	8	32	8	32	8
20	6	20	6	20	6	20	6
13	0	13	5	13	0	13	5

A) column (A)
B) column (B)
C) column (C)
D) column (D)

Ans: C Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Application

176. Refer to the data above. If there were 1,000 identical firms in this industry and total or market demand is as shown below, equilibrium price will be:

Price	Quantitydemanded
$50	3,000
42	6,000
36	9,000
32	11,000
20	14,000
13	19,500

A) $32.
B) $42.
C) $13.
D) $36.

Ans: D Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

Use the following to answer questions 177-183:

Total product	Total fixed cost	Total variable cost
0	$150	$ 0
1	150	50
2	150	75
3	150	105
4	150	145
5	150	200
6	150	270
7	150	360
8	150	475
9	150	620
10	150	800

177. Refer to the table above. If a competitive firm faced with these costs finds that it can sell its product at $60 per unit, it will:
A) produce 5 units and incur a loss of $50.
B) produce 6 units and incur a loss of $30.
C) produce 7 units and realize a profit of $32.
D) close down in the short run.

Ans: A Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

178. Refer to the table above. If product price were $30 per unit, the firm will:
A) produce 5 units and incur a loss of $50.
B) produce 6 units and incur a loss of $30.
C) produce 7 units and realize a loss of $32.
D) shut down in the short run.

Ans: D Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

179. Refer to the table above. If product price were $35 per unit, the firm will:
A) produce 5 units and incur a loss of $50.
B) produce 6 units and incur a loss of $30.
C) produce 7 units and realize a loss of $32.
D) be indifferent as to shutting down or producing 3 units.

Ans: D Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

180. Refer to the table. Which of the following correctly represents the competitive firm's short-run supply schedule?

P	(A) QS	P	(B) QS	P	(C) QS	P	(D) QS
$ 20	1	$ 20	0	$ 20	0	$ 20	3
30	2	30	0	30	0	30	4
45	3	45	4	45	0	45	5
60	4	60	5	60	0	60	6
75	5	75	6	75	5	75	7
95	6	95	7	95	6	95	8
120	7	120	8	120	7	120	9
150	8	150	9	150	8	150	10

A) A
B) B
C) C
D) D

Ans: B Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Application

181. Refer to the table. Now assume there are 600 identical firms in this industry, that is, there are 600 firms, each of which has the same cost data as the single firm discussed above. Suppose, too, that the demand curve for this industry is as follows:

Price	Quantity demanded
$ 20	6,800
30	5,975
45	5,500
60	5,125
75	4,500
95	4,200
120	3,600
150	2,400

Equilibrium price will be:
A) $60.
B) $95.
C) $120.
D) $75.

Ans: B Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

182. Refer to the table. Now assume there are 600 identical firms in this industry, that is, there are 600 firms, each of which has the same cost data as the single firm discussed above. Suppose, too, that the demand curve for this industry is as follows:

Price	Quantity demanded
$ 20	6,800
30	5,975
45	5,500
60	5,125
75	4,500
95	4,200
120	3,600
150	2,400

Equilibrium output for each of the firms will be:
A) 7 units.
B) 6 units.
C) 5 units.
D) 9 units.

Ans: A Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

183. Refer to the table. Now assume there are 600 identical firms in this industry, that is, there are 600 firms, each of which has the same cost data as the single firm discussed above. Suppose, too, that the demand curve for this industry is as follows:

Price	Quantity demanded
$ 20	6,800
30	5,975
45	5,500
60	5,125
75	4,500
95	4,200
120	3,600
150	2,400

In equilibrium each firm will realize:
A) an economic profit of $155.
B) an economic profit of $35.
C) a loss of $45.
D) a loss of $135.

Ans: A Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

Use the following to answer questions 184-188:

It shows cost data for a firm that is selling in a perfectly competitive market.

Output	AFC	AVC	ATC	MC
1	$300	$100	$400	$100
2	150	75	225	50
3	100	70	170	60
4	75	73	148	80
5	60	80	140	110
6	50	90	140	140
7	43	103	146	180
8	38	119	156	230
9	33	138	171	290
10	30	160	190	360

184. Refer to the table above. If the market price for the firm's product is $50, the competitive firm will:
A) produce 1 unit.
B) produce 2 units.
C) produce 3 units.
D) shut down.

Ans: D Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Application

185. Refer to the table above. If the market price for the firm's product is $70, the competitive firm will:
A) produce 1 unit.
B) produce 2 units.
C) produce 3 units.
D) shut down.

Ans: C Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Application

186. Refer to the table above. If the market price for the firm's product is $180, the competitive firm will produce:
A) 5 units at an economic profit of $100.
B) 6 units at an economic profit of $120.
C) 8 units at an economic profit of $278.
D) 7 units at an economic profit of $238.

Ans: D Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

187. Refer to the table above. If the product price is $290, the per-unit economic profit at the profit-maximizing output is:
A) $119.
B) $76.
C) $133.
D) $171.

Ans: A Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

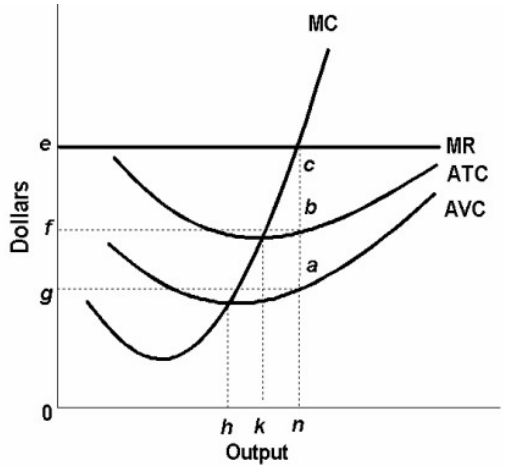
188. Refer to the table above. Now assume there are 100 identical firms in this industry, each of which has the same cost data as the single firm described above. Suppose too that the demand curve for this industry is as shown below:

Price	Quantity demanded
$360	400
290	500
230	600
180	700
140	800
110	900
80	1000

The equilibrium price will be:
A) $140.
B) $180.
C) $230.
D) $290.

Ans: B Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Calculation

Use the following to answer questions 189-190:



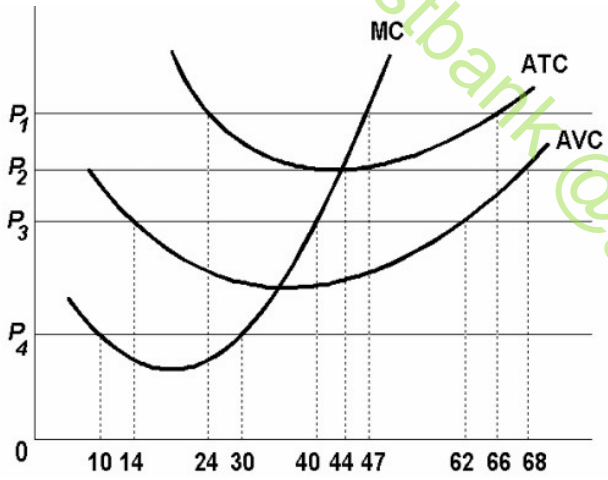
189. Refer to the diagram above. The short-run supply curve for this firm:
A) is the entire MC curve.
B) is the segment of the AVC curve lying to the right of the MC curve.
C) is the segment of the MC curve lying above the ATC curve.
D) is the segment of the MC curve lying above the AVC curve.

Ans: D Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

190. Refer to the diagram above. This firm is selling its product in a(n):
A) perfectly competitive market.
B) imperfectly competitive market.
C) monopsonistic market.
D) monopolistic market.

Ans: A Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

Use the following to answer questions 191-194:



191. Refer to the diagram above. At P_2, this firm will:
A) produce 44 units and realize an economic profit.
B) produce 44 units and earn only a normal profit.
C) produce 66 units and earn only a normal profit.
D) close down in the short run.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

192. Refer to the diagram above. At P_1, this firm will produce:
A) 47 units and break even.
B) 47 units and realize an economic profit.
C) 66 units and earn only a normal profit.
D) 24 units and earn only a normal profit.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

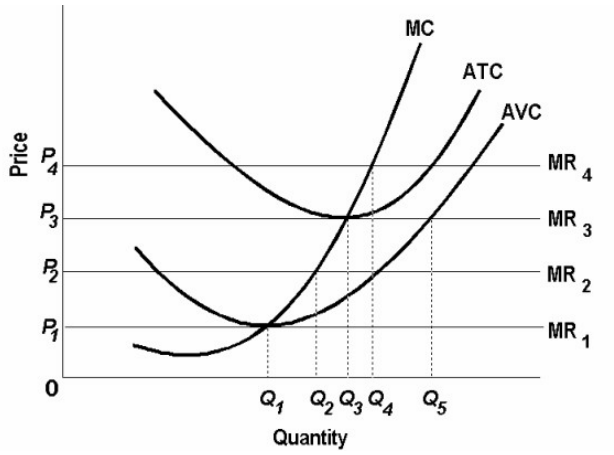
193. Refer to the diagram above. At P_4, this firm will:
A) shut down in the short run.
B) produce 30 units and realize a loss.
C) produce 30 units and earn only a normal profit.
D) produce 10 units and earn only a normal profit.

Ans: A Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

194. Refer to the diagram above. At P_3, this firm will:
A) produce 14 units and realize an economic profit.
B) produce 62 units and earn only a normal profit.
C) produce 40 units and realize a loss.
D) shut down in the short run.

Ans: C Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

Use the following to answer questions 195-198:



195. Refer to the diagram above. This firm will earn only a normal profit if product price is:
A) P_1.
B) P_2.
C) P_3.
D) P_4.

Ans: C Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

196. Refer to the diagram above. The firm will realize an economic profit if price is:
A) P_1.
B) P_2.
C) P_3.
D) P_4.

Ans: D Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

197. Refer to the diagram above. The firm will produce at a loss if price is:
A) P_1.
B) P_2.
C) P_3.
D) P_4.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

198. Refer to the diagram above. The firm will shut down at any price less than:
A) P_1.
B) P_2.
C) P_3.
D) P_4.

Ans: A Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Graphic

199. In short run, a firm should produce as long as:
A) P > = ATC
B) P > AVC
C) P = ATC
D) P > = minimum AVC

Ans: D Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 175-176 Subtopic: Generalized depiction Type: Formula

200. Refer to the table below. This firm apparently encounters diminishing marginal productivity when it produces the:

Total product	Total fixedcost	Total variablecost
0	$150	$ 0
1	150	50
2	150	75
3	150	105
4	150	145
5	150	200
6	150	270
7	150	360
8	150	475
9	150	620
10	150	800

A) second unit of output.
B) third unit of output.
C) fourth unit of output.
D) seventh unit of output.

Ans: B Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 177 Subtopic: Diminishing returns, production costs, and product supply
Type: Calculation

201. If a profit-seeking competitive firm is producing its profit-maximizing output and its total fixed costs fall by 25 percent, the firm should:
A) use more labour and less capital to produce a larger output.
B) not change its output.
C) reduce its output.
D) increase its output.

Ans: B Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 177 Subtopic: Diminishing returns, production costs, and product supply
Type: Application

202. Suppose the wage rate increases in a perfectly competitive industry. This change will result in a(n):
A) decrease in average total cost for a firm in the industry.
B) decrease in average variable cost for a firm in the industry.
C) increase in the marginal cost curve for a firm in the industry.
D) increase in short-run supply curve for a firm in the industry.

Ans: C Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 177 Subtopic: Diminishing returns, production costs, and product supply
Type: Application

203. Suppose the wage rates fall in a perfectly competitive industry. This change will result in a(n):
A) decrease in the marginal cost curve for a firm in the industry
B) increase in average variable cost for a firm in the industry.
C) increase in average total cost for a firm in the industry.
D) decrease in short-run supply curve for a firm in the industry.

Ans: A Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 177 Subtopic: Diminishing returns, production costs, and product supply
Type: Application

204. Assume that the average wage of workers increases in a perfectly competitive industry. This change will result in a(n):
A) increase in marginal cost for firms in the industry and an increase in the industry supply curve.
B) decrease in marginal cost for firms in the industry and a decrease in the industry supply curve.
C) decrease in marginal cost for firms in the industry and an increase in the industry supply curve.
D) increase in marginal cost for firms in the industry and a decrease in the industry supply curve.

Ans: D Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 177 Subtopic: Supply curve shifts Type: Application

205. Suppose the resource costs increase in a perfectly competitive industry. This change will result in a(n):
A) increase in average fixed cost for a firm in the industry.
B) decrease in average variable cost for a firm in the industry.
C) decrease in the marginal cost curve for a firm in the industry.
D) decrease in the short-run supply curve for a firm in the industry

Ans: D Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
Page: 177 Subtopic: Supply curve shifts Type: Application

206. Suppose the resource cost falls in a perfectly competitive industry. This change will result in a(n):
   A) increase in marginal cost for firms in the industry and an increase in the industry supply curve.
   B) decrease in marginal cost for firms in the industry and a decrease in the industry supply curve.
   C) decrease in marginal cost for firms in the industry and an increase in the industry supply curve.
   D) increase in marginal cost at each output level for firms in the industry and an increase in the industry supply curve.

   Ans: C Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
   Page: 177 Subtopic: Supply curve shifts Type: Application

207. Suppose the technological advance improves productivity in a perfectly competitive industry. This change will result in a(n):
   A) decrease in average fixed cost for a firm in the industry.
   B) increase in average variable cost for a firm in the industry.
   C) increase in the marginal cost curve for a firm in the industry.
   D) increase in the short-run supply curve for a firm in the industry

   Ans: D Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
   Page: 177 Subtopic: Supply curve shifts Type: Application

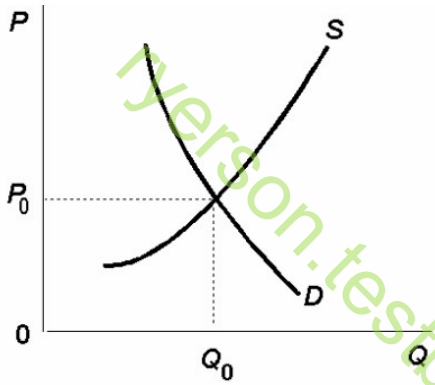
208. An industry experiences a technological advance that improves productivity. This change will result in a(n):
   A) increase in marginal cost for firms in the industry and a decrease in the industry supply curve.
   B) decrease in marginal cost for firms in the industry and a decrease in the industry supply curve.
   C) decrease in marginal cost for firms in the industry and an increase in the industry supply curve.
   D) increase in marginal cost for firms in the industry and an increase in the industry supply curve.

   Ans: C Level: Difficult Main Topic: 7.4 Marginal cost and short-run supply
   Page: 177 Subtopic: Supply curve shifts Type: Application

209. In perfect competition, price is determined where the industry's:
A) demand and supply curves intersect.
B) total cost is greater than total revenue.
C) demand intersects the firm's marginal cost curve.
D) average total cost equals total variable costs.

Ans: A Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
Page: 177 Subtopic: Firm and industry: Equilibrium price Type: Application

210. If the supply and demand curves above represent the market supply and demand for a perfectly competitive industry, then the demand curve a firm in the industry faces:



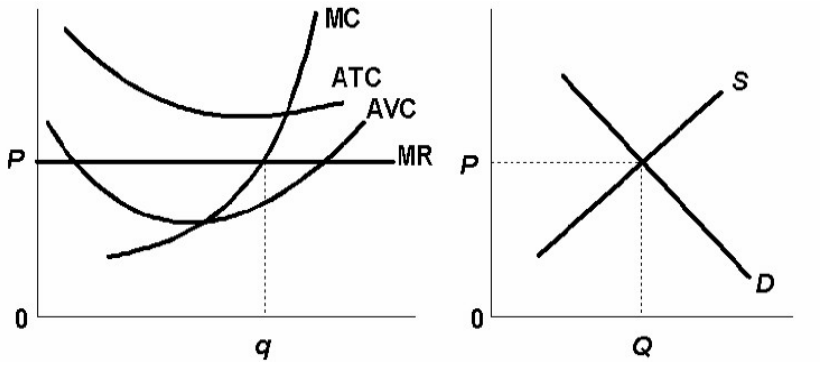
A) is identical to the market demand.
B) is equal to the marginal-revenue curve which is equal to P_0.
C) is more elastic than the market demand but has a marginal-revenue curve lying below it.
D) has the same slope as the market demand, but at P_0 its quantity demanded is only a fraction of Q_0.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 177-178 Subtopic: Firm and industry: Equilibrium price Type: Graphic

211. When demand increases, in the short run the perfectly competitive firm:
A) will spend more on advertising.
B) will earn higher profits or experience smaller losses.
C) will experience no change in costs as it steps up production.
D) can alter available inputs and output as well as the size of the plant.

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 177-178 Subtopic: Firm and industry: Equilibrium price Type: Application

212. Refer to the diagrams, which pertain to a perfectly competitive firm producing output q and the industry in which it operates. Which of the following is correct?



A) The diagrams portray neither long-run nor short-run equilibrium.
B) The diagrams portray both long-run and short-run equilibrium.
C) The diagrams portray short-run equilibrium, but not long-run equilibrium.
D) The diagrams portray long-run equilibrium, but not short-run equilibrium.

Ans: C Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 178 Subtopic: Firm and industry: Equilibrium price Type: Graphic

213. Which of the following statements is correct?
A) The demand curve for a perfectly competitive firm is perfectly elastic, but the demand curve for a perfectly competitive industry is downward sloping.
B) The demand curve for a perfectly competitive firm is downward sloping, but the demand curve for a perfectly competitive industry is perfectly elastic.
C) The demand curves are downward sloping for both a perfectly competitive firm and a perfectly competitive industry.
D) The demand curves are perfectly elastic for both a perfectly competitive firm and a perfectly competitive industry.

Ans: A Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 178 Subtopic: Firm and industry: Equilibrium price Type: Application

214. The demand curve in a perfectly competitive industry is _____, while the demand curve to a single firm in that industry is _____.
A) perfectly inelastic, perfectly elastic
B) downward sloping, perfectly elastic
C) downward sloping, perfectly inelastic
D) perfectly elastic, downward sloping

Ans: B Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 178 Subtopic: Firm and industry: Equilibrium price Type: Application

215. A perfectly competitive firm is precluded from making economic profit in the long run because:
A) it is a "price taker."
B) its demand curve is perfectly elastic.
C) it produces a differentiated product.
D) free entry to the industry.

Ans: D Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 179 Subtopic: Assumptions Type: Application

216. A constant-cost industry is one in which:
A) resource prices fall as output is increased.
B) resource prices rise as output is increased.
C) resource prices remain unchanged as output is increased.
D) small and large levels of output entail the same total costs.

Ans: C Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: Assumptions Type: Definition

217. In a perfectly competitive industry:
A) there will be no economic profits in either the short run or the long run.
B) economic profits may persist in the long run if consumer demand is strong and stable.
C) there may be economic profits in the short run, but not in the long run.
D) there may be economic profits in the long run, but not in the short run.

Ans: C Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: The goal of our analysis Type: Application

218. Assume a perfectly competitive firm is maximizing profit at some output at which long-run average total cost is at a minimum. Then:
A) the firm is earning an economic profit.
B) there is no tendency for the firm's industry to expand or contract.
C) allocative but not productive efficiency is being achieved.
D) other firms will enter this industry.

Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: The goal of our analysis Type: Application

219. We would expect an industry to expand if firms in that industry are:
A) earning normal profits.
B) earning economic profits.
C) realizing an equality of total revenue and total costs.
D) earning accounting profits.

Ans: B Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: The goal of our analysis Type: Application

220. Which of the following is true concerning perfectly competitive industries?
A) There will be economic losses in the long run because of cut-throat competition.
B) Economic profits will persist in the long run if consumer demand is strong and stable.
C) In the short run, firms may incur economic losses or earn economic profit, but in the long run they earn a normal profit.
D) There are economic profits in the long run, but not in the short run.

Ans: C Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: The goal of our analysis Type: Application

221. When a perfectly competitive firm is in long-run equilibrium, price is equal to:
A) marginal cost, but may be greater or less than average cost.
B) minimum of the average cost, and also to marginal cost.
C) minimum average cost, but may be greater or less than marginal cost.
D) marginal revenue, but may be greater or less than both average and marginal cost.

Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: Long-run equilibrium Type: Application

222. When a perfectly competitive industry is in long-run equilibrium, which statement is true?
A) Average total cost is less than marginal cost.
B) Price and average total cost are equal.
C) Marginal cost is at its maximum level.
D) Marginal revenue is greater than price.

Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: Long-run equilibrium Type: Application

223. Long-run competitive equilibrium:
A) is realized only in constant-cost industries.
B) will never change once it is realized.
C) is not economically efficient.
D) results in zero economic profits.

Ans: D Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: Long-run equilibrium Type: Application

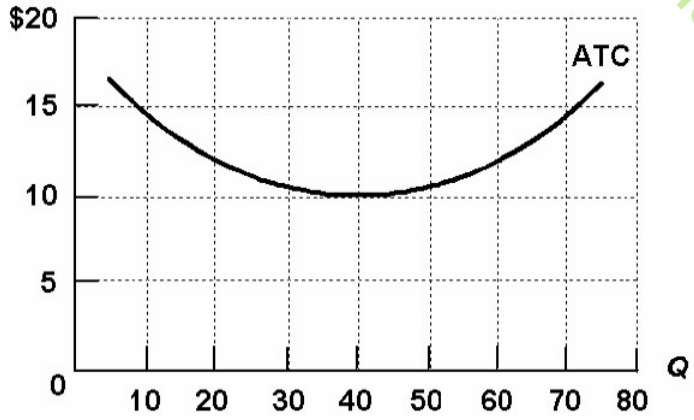
224. When a perfectly competitive firm is in long-run equilibrium:
A) marginal revenue equals marginal cost.
B) price equals marginal cost.
C) minimum average total cost equals price.
D) all of the above are true.

Ans: D Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: Long-run equilibrium Type: Application

225. A perfectly competitive firm:
A) must earn a normal profit in the short run.
B) cannot earn economic profit in the long run.
C) may realize either economic profit or losses in the long run.
D) cannot earn economic profit in the short run.

Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180 Subtopic: Long-run equilibrium Type: Application

Use the following to answer questions 226-228:



226. Refer to the diagram above showing the average total cost curve for a perfectly competitive firm. At the long-run equilibrium level of output, this firm's total revenue:
A) is $10.
B) is $40.
C) is $400.
D) cannot be determined from the information provided.

Ans: C Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Graphic

227. Refer to the diagram above showing the average total cost curve for a perfectly competitive firm. At the long-run equilibrium level of output, this firm's total cost:
A) is $10.
B) is $400.
C) is $40.
D) cannot be determined from the information provided.

Ans: B Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Graphic

228. Refer to the diagram above showing the average total cost curve for a perfectly competitive firm. At the long-run equilibrium level of output, this firm's economic profit:
A) is zero.
B) is $400.
C) is $200.
D) cannot be determined from the information provided.

Ans: A Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Graphic

229. In long-run equilibrium a perfectly competitive firm will operate where price is:
A) greater than MR but equal to MC and minimum ATC.
B) greater than MR and MC, but equal to minimum ATC.
C) greater than MC and minimum ATC, but equal to MR.
D) equal to MR, MC, and minimum ATC.

Ans: D Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Formula

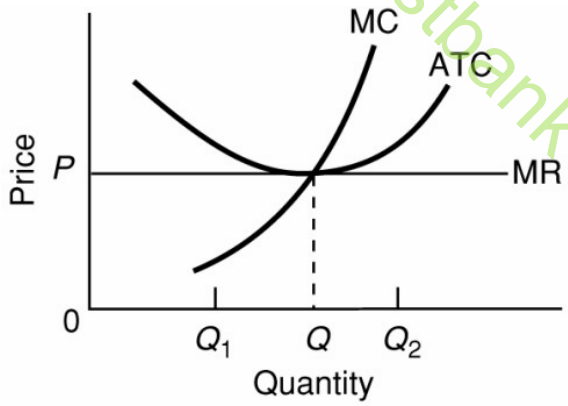
230. Which is true of a perfectly competitive firm in the long-run equilibrium?
A) Average fixed cost equals price.
B) Marginal cost equals marginal product.
C) Price equals marginal cost.
D) Average variable cost equals marginal cost.

Ans: C Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Application

231. Assume that the market for soybeans is perfectly competitive. Currently, firms growing soybeans are experiencing economic profits. In the long run, we can expect this market's:
A) supply curve to increase.
B) demand curve to increase.
C) supply curve to decrease.
D) demand curve to decrease.

Ans: A Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Application

232. The diagram below portrays:



A) a competitive firm which should shut down in the short run.
B) the equilibrium position of a competitive firm in the long run.
C) a competitive firm which is realizing an economic profit.
D) the loss-minimizing position of a competitive firm in the short run.

Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Graphic

233. Suppose a firm in a perfectly competitive market discovers that the price of its product is above its minimum AVC point but below ATC. Given this, the firm:
A) minimizes losses by producing at the minimum point of its AVC curve.
B) maximizes profits by producing where MR = ATC.
C) should close down immediately.
D) should continue producing in the short run, but leave the industry in the long run.

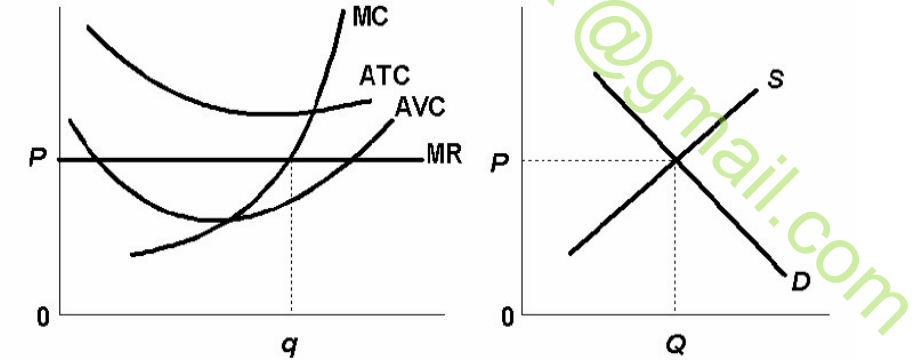
Ans: D Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Application

234. Which of the following will not hold true for a competitive firm in long-run equilibrium?
A) P equals AFC
B) P equals minimum ATC
C) MC equals minimum ATC
D) P equals MC

Ans: A Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Formula

Use the following to answer question 235:

These diagrams, pertain to a perfectly competitive firm producing output q and the industry in which it operates



235. Refer to the diagrams above. In the long run we should expect:
A) firms to enter the industry, market supply to rise, and product price to fall.
B) firms to leave the industry, market supply to rise, and product price to fall.
C) firms to leave the industry, market supply to fall, and product price to rise.
D) no change in the number of firms in this industry.

Ans: C Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Graphic

236. Which of the following will not hold true for a competitive firm in long-run equilibrium?
A) P equals AFC
B) P equals minimum ATC
C) MC equals minimum ATC
D) P equals MC

Ans: A Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Formula

237. Suppose a firm in a perfectly competitive market discovers that the price of its product is above its minimum AVC point but below ATC. Given this, the firm:
A) minimizes losses by producing at the minimum point of its AVC curve.
B) maximizes profits by producing where MR = ATC.
C) should close down immediately.
D) should continue producing in the short run, but leave the industry in the long run.

Ans: D Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Application

238. If a perfectly competitive firm is producing at the MR = MC output level and earning an economic profit, then:
A) the selling price for this firm is above the market equilibrium price.
B) new firms will enter this market.
C) some existing firms in this market will leave.
D) there must be price fixing by the industry's firms.

Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Application

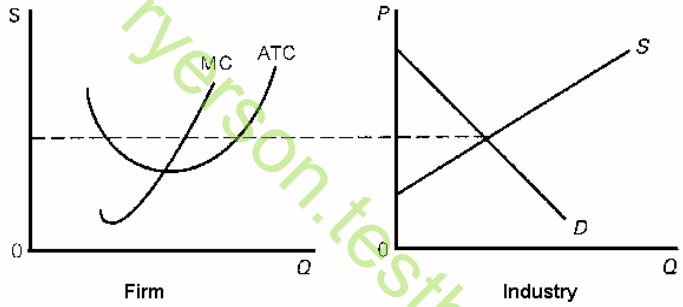
239. Which of the following statements is correct?
A) Economic profits induce firms to enter an industry; losses encourage firms to leave.
B) Economic profits induce firms to leave an industry; profits encourage firms to leave.
C) Economic profits and losses have no significant impact on the growth or decline of an industry.
D) Normal profits will cause an industry to expand.

Ans: A Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Application

240. If a perfectly competitive firm is in short-run equilibrium and its marginal cost exceeds its average total cost, then we can conclude that:
A) this is a decreasing-cost industry.
B) this is an increasing-cost industry.
C) firms will exit the industry in the long run.
D) firms will enter the industry in the long run.

Ans: D Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Application

241. A perfectly competitive firm, as shown below, will face what kind of change in profits over the long run, assuming industry demand is constant?



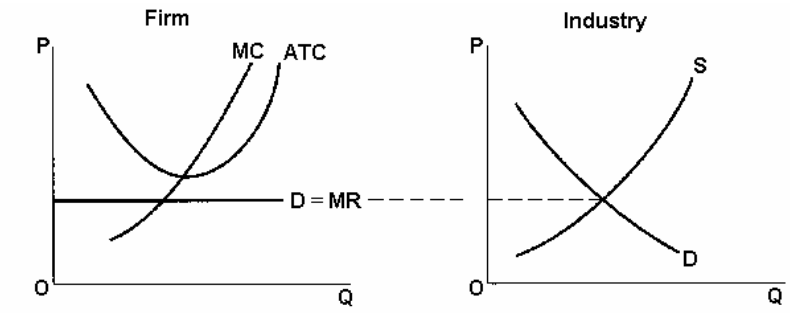
A) Profits will increase.
B) Profits will decrease.
C) Profits will be unchanged.
D) Cannot be decided from the information given.

Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Graphic

242. If firms enter a perfectly competitive industry, then in the long run this change will shift the industry:
A) demand curve to the left, and the market price will decrease.
B) demand curve to the right, and the market price will increase.
C) supply curve to the right, and the market price will decrease.
D) supply curve to the left, and the market price will increase.

Ans: C Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Application

243. According to the graphs below, what will happen in the long run to industry supply and the equilibrium price of the product?



A) S will decrease, P will decrease.
B) S will increase, P will decrease.
C) S will decrease, P will increase.
D) S will increase, P will increase.

Ans: C Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Graphic

244. If firms are losing money in a perfectly competitive industry, then in the long run this situation will shift the industry:
A) demand curve to the right, and the market price will increase.
B) supply curve to the left, and the market price will increase.
C) supply curve to the right, and the market price will decrease.
D) demand curve to the left, and the market price will decrease.

Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Subtopic: Long-run equilibrium Type: Application

245. Perfectly competitive industry X has constant costs and its product is an inferior good. The industry is currently in long-run equilibrium. The economy now goes into a recession and average incomes decline. The result will be:
A) an increase in output and in the price of the product.
B) an increase in output, but not in the price, of the product.
C) a decrease in the output, but not in the price, of the product.
D) a decrease in output and in the price of the product.

Ans: B Level: Difficult Main Topic: 7.5 Profit maximization in the long run
Page: 182 Subtopic: Long-run supply for a constant-cost industry
Type: Calculation

246. A constant-cost industry is one in which:
   A) a higher price per unit will not result in an increased output.
   B) if 100 units can be produced for $100, then 150 can be produced for $150, 200 for $200, and so forth.
   C) the demand curve and therefore the unit price and quantity sold seldom change.
   D) the total cost of producing 200 or 300 units is no greater than the cost of producing 100 units.

   Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
   Page: 182 Subtopic: Long-run supply for a constant-cost industry Type: Definition

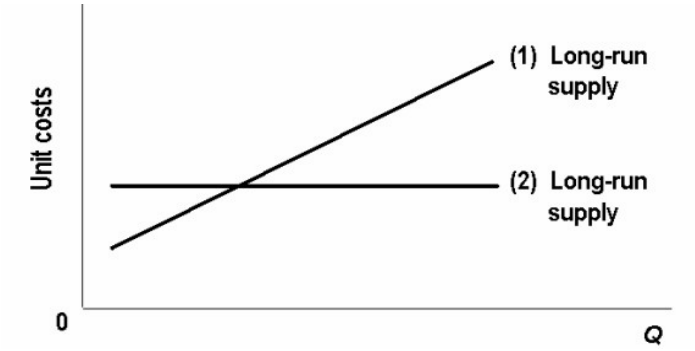
247. If a perfectly competitive constant-cost industry is realizing economic profits, we can expect industry supply to:
   A) increase, output to increase, price to decrease, and profits to decrease.
   B) increase, output to increase, price to increase, and profits to decrease.
   C) decrease, output to decrease, price to increase, and profits to increase.
   D) increase, output to decrease, price to decrease, and profits to decrease.

   Ans: A Level: Difficult Main Topic: 7.5 Profit maximization in the long run
   Page: 182 Subtopic: Long-run supply for a constant-cost industry
   Type: Application

248. The long-run supply curve would be perfectly elastic in:
   A) an increasing-cost industry.
   B) a decreasing-cost industry.
   C) a constant-cost industry.
   D) a variable-cost industry.

   Ans: C Level: Easy Main Topic: 7.5 Profit maximization in the long run
   Page: 182 Subtopic: Long-run supply for a constant-cost industry Type: Definition

249. Refer to the diagram below, Line (2) reflects the long-run supply curve for:



A) a constant-cost industry.
B) a decreasing-cost industry.
C) an increasing-cost industry.
D) technologically progressive industry.

Ans: A Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 182 Subtopic: Long-run supply for a constant-cost industry Type: Graphic

250. The long-run supply curve would be perfectly elastic in:
A) an increasing-cost industry.
B) a decreasing-cost industry.
C) a variable-cost industry.
D) a constant-cost industry.

Ans: D Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 182 Subtopic: Long-run supply for a constant-cost industry Type: Definition

251. Suppose a perfectly competitive increasing-cost industry is in long-run equilibrium. Now assume that a decrease in consumer demand occurs. After all resulting adjustments have been completed, the new equilibrium price:
A) and industry output will be less than the initial price and output.
B) will be greater than the initial price, but the new industry output will be less than the original output.
C) will be less than the initial price, but the new industry output will be greater than the original output.
D) and industry output will be greater than the initial price and output.

Ans: A Level: Difficult Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Application

252. Which of the following statements is correct?
   A) The long-run supply curve for a perfectly competitive increasing-cost industry will be upward sloping.
   B) The long-run supply curve for a perfectly competitive increasing-cost industry will be perfectly elastic.
   C) The long-run supply curve for a perfectly competitive industry will be less elastic than the industry's short-run supply curve.
   D) The long-run supply curve for a perfectly competitive decreasing-cost industry will be upward sloping.

   Ans: A Level: Difficult Main Topic: 7.5 Profit maximization in the long run
   Page: 183 Subtopic: Long-run supply for an increasing-cost industry
   Type: Application

253. Assume a perfectly competitive increasing-cost industry is initially in long-run equilibrium and that an increase in consumer demand occurs. After all economic adjustments have been completed product price will be:
   A) lower, but total output will be larger than originally.
   B) higher and total output will be larger than originally.
   C) lower and total output will be smaller than originally.
   D) higher, but total output will be smaller than originally.

   Ans: B Level: Difficult Main Topic: 7.5 Profit maximization in the long run
   Page: 183 Subtopic: Long-run supply for an increasing-cost industry
   Type: Application

254. Assume a perfectly competitive, increasing-cost industry is in long-run equilibrium. If a decline in demand occurs, firms will:
   A) leave the industry, price will decrease, and quantity produced will increase.
   B) enter the industry and price and quantity will both increase.
   C) leave the industry and price and output will both increase.
   D) leave the industry and price and output will both decline.

   Ans: D Level: Difficult Main Topic: 7.5 Profit maximization in the long run
   Page: 183 Subtopic: Long-run supply for an increasing-cost industry
   Type: Application

255. An increasing-cost industry is associated with:
A) a perfectly elastic long-run supply curve.
B) an upward sloping long-run supply curve.
C) a perfectly inelastic long-run supply curve.
D) an upward sloping long-run demand curve.

Ans: B Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Definition

256. An increasing-cost industry is the result of:
A) higher resource prices which occur as the industry expands.
B) a change in the industry's minimum efficient scale.
C) X-inefficiency.
D) the law of diminishing returns.

Ans: A Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Application

257. Suppose losses cause industry X to contract and, as a result, the prices of relevant inputs decline. Industry X is:
A) a constant-cost industry.
B) a decreasing-cost industry.
C) an increasing-cost industry.
D) encountering X-inefficiency.

Ans: C Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Application

258. One explanation for the existence of an increasing-cost industry is:
A) increasing marginal returns to labour occur.
B) firms produce beyond the point of minimum long-run average total costs.
C) perfectly elastic long-run supply schedules are observed in the industry.
D) as the industry expands, input prices are bid up for some factor of production.

Ans: D Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Application

259. If the long-run supply curve of a perfectly competitive industry slopes upward, this implies that the prices of relevant resources:
A) will fall as the industry expands.
B) are constant as the industry expands.
C) rise as the industry contracts.
D) rise as the industry expands.

Ans: D Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Application

260. The long-run supply curve would be upward sloping in:
A) an increasing-cost industry.
B) a decreasing-cost industry.
C) a constant-cost industry.
D) a variable-cost industry.

Ans: A Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Definition

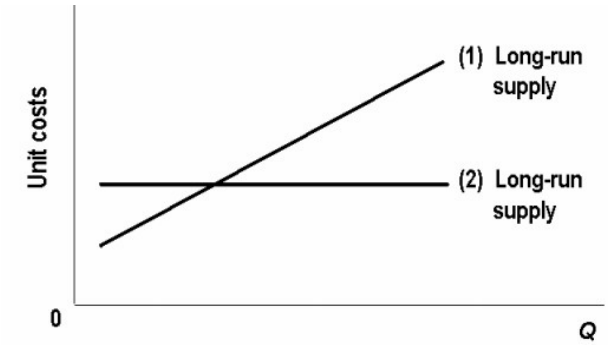
261. Assume a perfectly competitive increasing-cost industry is in long-run equilibrium. Now suppose that an increase in consumer demand occurs. After all the resulting adjustments have been completed, the new equilibrium price:
A) and industry output will be less than the initial price and output.
B) and industry output will be greater than the initial price and output.
C) will be greater, but the new output will be less than initially.
D) will be less, but the new output will be greater than initially.

Ans: B Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Application

262. Assume a perfectly competitive increasing-cost industry is initially in long-run equilibrium and that an increase in consumer demand occurs. After all economic adjustments have been completed, product price will be:
A) higher, and total output will be larger than originally.
B) lower, and total output will be smaller than originally.
C) lower, but total output will be larger than originally.
D) higher, but total output will be smaller than originally.

Ans: A Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Application

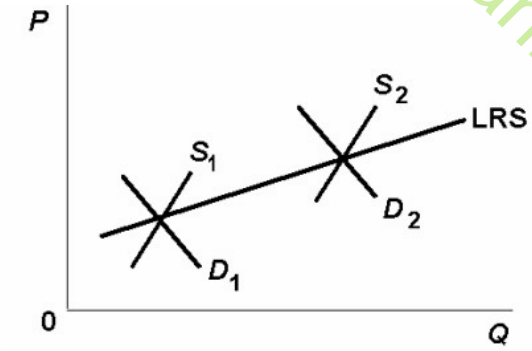
263. Refer to the diagram below. Line (1) reflects the long-run supply curve for:



A) a constant-cost industry.
B) an increasing-cost industry.
C) a decreasing-cost industry.
D) technologically progressive industry.

Ans: B Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Graphic

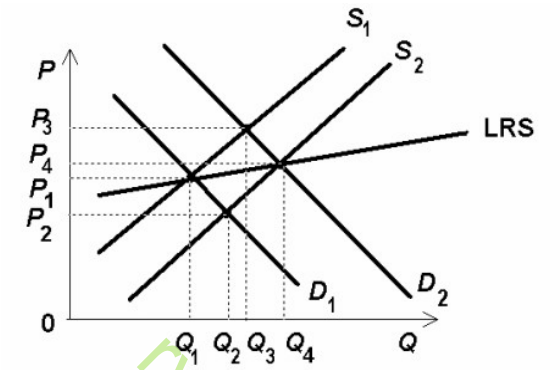
264. The diagram below depicts long-run supply for:



A) a constant-cost industry.
B) a decreasing-cost industry.
C) an increasing-cost industry.
D) none of the above.

Ans: C Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183 Subtopic: Long-run supply for an increasing-cost industry
Type: Graphic

265. The industry represented by the graph where S_1 and S_2 are short-run supply curves, D_1 and D_2 are short-run demand curves, and LRS is the long-run supply curve can be said to be:



A) a constant-cost industry.
B) an average-cost industry.
C) a decreasing-cost industry.
D) an increasing-cost industry.

Ans: D Level: Moderate Main Topic: 7.5 Profit maximization in the long run Page: 183 Subtopic: Long-run supply for an increasing-cost industry Type: Graphic

266. The long-run supply curve under perfect competition will be:
A) downward sloping in a decreasing-cost industry and upward sloping in an increasing-cost industry.
B) horizontal in a constant-cost industry and downward sloping in an increasing-cost industry.
C) vertical in a constant-cost industry and upward sloping in a decreasing-cost industry.
D) upward sloping in an increasing-cost industry and vertical in a constant-cost industry.

Ans: A Level: Easy Main Topic: 7.5 Profit maximization in the long run Page: 183-184 Subtopic: Long-run supply for a decreasing-cost industry Type: Definition

267. When compact disc (CD) players first came on the market, they sold for over $1,000. Now a good CD player can be purchased for $100. These facts imply that:
A) the CD industry was once competitive, but is now monopolistic.
B) fewer firms produce CD players than was the case five or ten years ago.
C) the demand curve for CD players has shifted leftward.
D) the CD player industry is a decreasing-cost industry.

Ans: D Level: Difficult Main Topic: 7.5 Profit maximization in the long run
Page: 183-184 Subtopic: Long-run supply for a decreasing-cost industry
Type: Application

268. Suppose that an industry's long-run supply curve is downward sloping. This suggests that:
A) it is an increasing-cost industry.
B) relevant inputs have become more expensive as the industry has expanded.
C) technology has become less efficient as a result of the industry's expansion.
D) it is a decreasing-cost industry.

Ans: D Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 183-184 Subtopic: Long-run supply for a decreasing-cost industry
Type: Application

269. A decreasing-cost industry is one in which:
A) contraction of the industry will decrease unit costs.
B) input prices fall or technology improves as the industry expands.
C) the long-run supply curve is perfectly elastic.
D) the long-run supply curve is upward sloping.

Ans: B Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183-184 Subtopic: Long-run supply for a decreasing-cost industry
Type: Definition

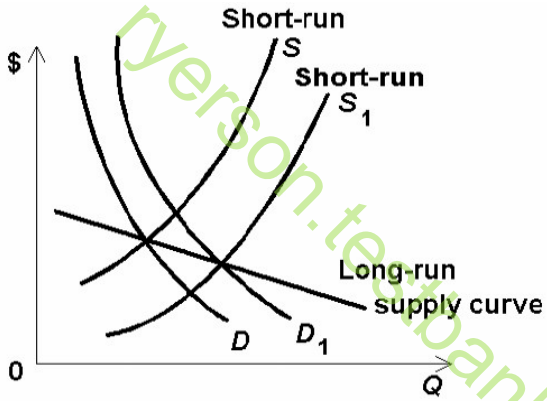
270. The long-run supply curve would be downward sloping in:
A) an increasing-cost industry.
B) a decreasing-cost industry.
C) a constant-cost industry.
D) a variable-cost industry.

Ans: B Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183-184 Subtopic: Long-run supply for a decreasing-cost industry
Type: Definition

271. Suppose an increase in product demand occurs in a decreasing-cost industry. As a result:
A) the new long-run equilibrium price will be lower than the original long-run equilibrium price.
B) equilibrium quantity will decline.
C) firms will eventually leave the industry.
D) the new long-run equilibrium price will be higher than the original price.

Ans: A Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 183-184 Subtopic: Long-run supply for a decreasing-cost industry
Type: Application

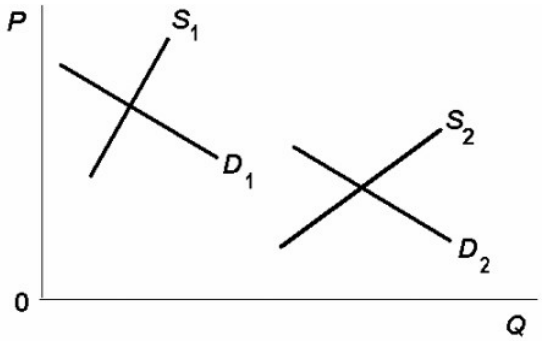
272. The following diagram represents a(n):



A) decreasing-cost industry: Firms may be paying lower prices for their inputs when the industry expands.
B) increasing-cost industry: Firms may be paying higher prices for their inputs when the industry expands.
C) competitive, break-even industry: The long-run supply curve is upward sloping as it must be according to the law of supply.
D) constant-cost industry: Prices of the inputs stay the same, and other production costs are constant as the industry expands.

Ans: A Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 183-184 Subtopic: Long-run supply for a decreasing- cost industry
Type: Graphic

273. The long-run supply curve for the industry described in the graph would be:



A) vertical.
B) horizontal.
C) upward sloping.
D) downward sloping.

Ans: D Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 183-184 Subtopic: Long-run supply for a decreasing-cost industry
Type: Graphic

274. Productive efficiency refers to:
A) cost minimization, where P = minimum ATC.
B) production, where P = MC.
C) maximizing profits by producing where MR = MC.
D) setting TR = TC.

Ans: A Level: Easy Main Topic: 7.6 Perfect competition and efficiency
Page: 184 Subtopic: Productive efficiency: P= Minimum ATC Type: Formula

275. The term "productive efficiency" refers to:
A) any short-run equilibrium position of a competitive firm.
B) the production of the product-mix most desired by consumers.
C) the production of a good at the lowest average total cost.
D) fulfilling the condition P = MC.

Ans: C Level: Easy Main Topic: 7.6 Perfect competition and efficiency
Page: 184 Subtopic: Productive efficiency: P= Minimum ATC Type: Definition

276. Which statement is correct?
   A) In order to maximize profits a firm should produce at that output at which total revenue is greatest.
   B) In long-run equilibrium a competitive firm will produce at the point of minimum average costs.
   C) A competitive firm will produce in the short run so long as total receipts are sufficient to cover total fixed costs.
   D) A competitive firm will close down in the short run whenever price is less than the minimum attainable average total cost.

   Ans: B Level: Difficult Main Topic: 7.6 Perfect competition and efficiency
   Page: 184 Subtopic: Productive efficiency: P= Minimum ATC Type: Application

277. Which would indicate that a firm is operating under conditions of perfect competition and is being productively efficient?
   A) It is making economic profits in the long run.
   B) Marginal cost equals average variable cost.
   C) It produces at the minimum average total cost.
   D) Its marginal revenue is less than average revenue.

   Ans: C Level: Difficult Main Topic: 7.6 Perfect competition and efficiency
   Page: 184 Subtopic: Productive efficiency: P= Minimum ATC Type: Application

278. An economy is producing at the least-cost rate of production when:
   A) price and the minimum average cost are equal.
   B) marginal cost is greater than average total cost.
   C) marginal revenue is greater than price.
   D) price and marginal revenue are equal.

   Ans: A Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
   Page: 184 Subtopic: Productive efficiency: P= Minimum ATC Type: Application

279. In long-run equilibrium under conditions of perfect competition and productive efficiency, all firms produce at minimum:
   A) average total cost.
   B) marginal cost.
   C) total cost.
   D) average variable cost.

   Ans: A Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
   Page: 184 Subtopic: Productive efficiency: P= Minimum ATC Type: Application

280. The term "allocative efficiency" refers to:
A) the level of output which coincides with the intersection of the MC and AVC curves.
B) minimization of the AFC in the production of any good.
C) the production of the product-mix most desired by consumers.
D) the production of a good at the lowest average total cost.

Ans: C Level: Easy Main Topic: 7.6 Perfect competition and efficiency
Page: 184 Subtopic: Allocative efficiency: P=MC Type: Definition

281. Resources are efficiently allocated when production occurs where:
A) marginal cost equals average variable cost.
B) price is equal to average revenue.
C) price is equal to marginal cost.
D) price is equal to average variable cost.

Ans: C Level: Easy Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

282. Allocative efficiency occurs when the:
A) minimum of average total cost equals average revenue.
B) minimum of average total cost equals marginal revenue.
C) marginal cost equals the marginal benefit to society.
D) marginal revenue equals marginal benefit to society.

Ans: C Level: Easy Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Definition

283. "Allocative efficiency" is achieved when the production of a good occurs where:
A) P = minimum ATC.
B) P = MC.
C) P = minimum AVC.
D) total revenue is equal to TFC.

Ans: B Level: Easy Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Formula

284. Perfect competition produces a socially optimal allocation of resources in the long run because:
A) marginal cost equals marginal revenue.
B) marginal cost equals average total cost.
C) marginal revenue equals price.
D) marginal cost equals price.

Ans: D Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

285. When a perfectly competitive firm is in long-run equilibrium and is allocatively efficient:
A) total revenue is at a maximum.
B) marginal cost equals marginal revenue.
C) average variable cost equals marginal cost.
D) total cost is at a minimum.

Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

286. Resources are efficiently allocated when production occurs at that output at which:
A) P equals MR.
B) P equals AVC.
C) P exceeds MR.
D) P equals MC.

Ans: D Level: Easy Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Formula

287. Resources are efficiently allocated when production occurs at that output level where price:
A) equals marginal cost.
B) equals marginal revenue.
C) is greater than marginal revenue.
D) is equal to average variable cost.

Ans: A Level: Easy Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Definition

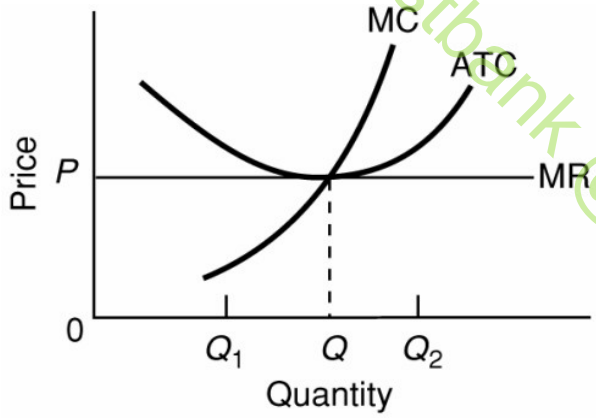
288. In a perfectly competitive industry, an optimal allocation of scarce resources occurs when:
A) P = AC.
B) P = MC.
C) MR = MC.
D) TR = TC.

Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Formula

289. When a perfectly competitive firm is in long-run equilibrium and is allocatively efficient:
A) total revenue is at a maximum.
B) marginal cost equals marginal revenue.
C) average variable cost equals marginal cost.
D) total cost is at a minimum.

Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

Use the following to answer questions 290-291:



290. Refer to the diagram above. By producing output level Q:
A) neither productive nor allocative efficiency are achieved.
B) both productive and allocative efficiency are achieved.
C) allocative efficiency is achieved, but productive efficiency is not.
D) productive efficiency is achieved, but allocative efficiency is not.

Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Graphic

291. Refer to the diagram above. At output level Q_1:
A) neither productive nor allocative efficiency are achieved.
B) both productive and allocative efficiency are achieved.
C) allocative efficiency is achieved, but productive efficiency is not.
D) productive efficiency is achieved, but allocative efficiency is not.

Ans: A Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Graphic

292. Under perfect competition in the long run:
A) neither "allocative efficiency" nor "productive efficiency" are achieved.
B) both "allocative efficiency" and "productive efficiency" are achieved.
C) "productive efficiency" is achieved, but "allocative efficiency" is not.
D) "allocative efficiency" is achieved, but "productive efficiency" is not.

Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

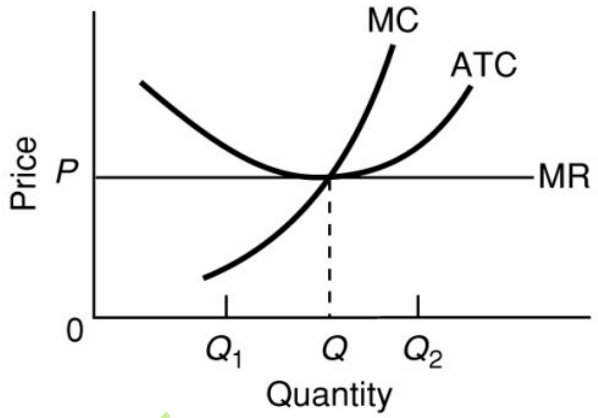
293. If for a firm P = minimum ATC = MC, then:
A) neither "allocative efficiency" nor "productive efficiency" is being achieved.
B) "productive efficiency" is being achieved, but "allocative efficiency" is not.
C) both "allocative efficiency" and "productive efficiency" are being achieved.
D) "allocative efficiency" is being achieved, but "productive efficiency" is not.

Ans: C Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

294. A firm is producing an output such that the benefit from one more unit is more than the cost of producing that additional unit. This means the firm is:
A) producing more output than allocative efficiency requires.
B) producing less output than allocative efficiency requires.
C) realizing productive efficiency.
D) producing an inefficient output, but we cannot say whether output should be increased or decreased.

Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

Use the following to answer questions 295-296:



295. Refer to the diagram above. At output level Q_1:
A) resources are overallocated to this product and productive efficiency is not realized.
B) resources are underallocated to this product and productive efficiency is not realized.
C) productive efficiency is achieved, but resources are underallocated to this product.
D) productive efficiency is achieved, but resources are overallocated to this product.

Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Graphic

296. Refer to the diagram above. At output level Q_2:
A) resources are overallocated to this product and productive efficiency is not realized.
B) resources are underallocated to this product and productive efficiency is not realized.
C) productive efficiency is achieved, but resources are underallocated to this product.
D) productive efficiency is achieved, but resources are overallocated to this product.

Ans: A Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Graphic

297. If the price of product Y is $25 and its marginal cost is $18:
A) Y is being produced with the least-cost combination of resources.
B) society will realize a net gain if less of Y is produced.
C) resources are being underallocated to Y.
D) resources are being overallocated to Y.

Ans: C Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

298. Assume that society places a higher value on the last unit of X produced than the value of the resources used to produce that unit. With no externalities, this information means that:
A) total cost is greater than total revenue.
B) price is greater than marginal cost.
C) marginal cost is greater than price.
D) resources are being overallocated to X.

Ans: B Level: Difficult Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

299. If production is occurring where marginal cost exceeds price, the perfectly competitive firm will:
A) maximize profit, but resources will be underallocated to the product.
B) maximize profit, but resources will be overallocated to the product.
C) fail to maximize profit and resources will be underallocated to the product.
D) fail to maximize profit and resources will be overallocated to the product.

Ans: D Level: Difficult Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

300. If a perfectly competitive firm is producing where price exceeds marginal cost, then:
A) the firm will fail to maximize profit, but resources will be efficiently allocated.
B) the firm will fail to maximize profit and resources will be overallocated to the product.
C) the firm will fail to maximize profit and resources will be underallocated to the product.
D) resources will be underallocated to the product, but the firm will maximize profit.

Ans: C Level: Difficult Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

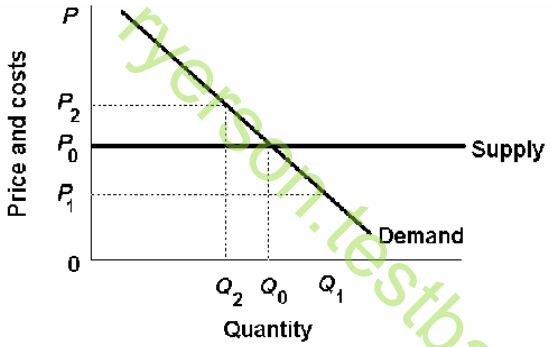
301. If a market is characterized by substantial external costs:
A) resources will be overallocated to the product.
B) resources will be underallocated to the product.
C) entry to the industry will be blocked.
D) government will have to assume responsibility for the product's production.

Ans: A Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

302. If a market is characterized by substantial external benefits:
A) it must be a natural monopoly.
B) resources will be overallocated to the product.
C) resources will be underallocated to the product.
D) the exclusion principle will not apply.

Ans: C Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Application

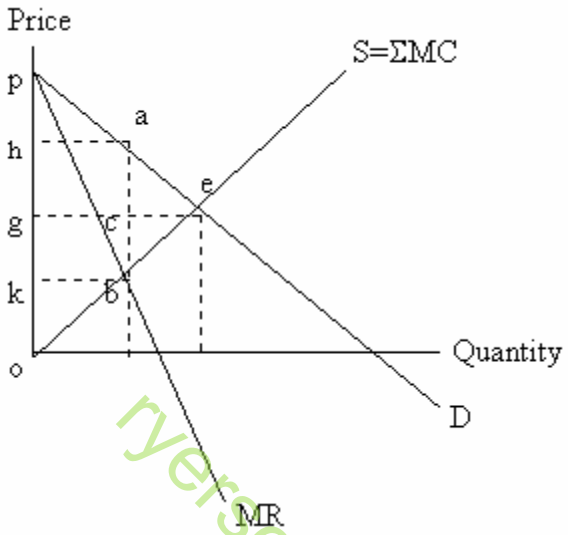
303. Refer to the graph below. If these supply and demand curves accurately reflect all costs and benefits in the production and consumption of a product, we know that in a competitive market marginal:



A) cost equals marginal benefit at P_1Q_1.
B) benefit exceeds marginal cost at an output level of Q_2.
C) cost exceeds marginal benefit at an output level of Q_2.
D) cost equals marginal benefit at all points on the supply curve.

Ans: B Level: Difficult Main Topic: 7.6 Perfect competition and efficiency
Page: 184-186 Subtopic: Allocative efficiency: P=MC Type: Graphic

Use the following to answer questions 304-305:



304. The diagram above represents an industry. Assuming that the market structure for this industry is perfect competition, the producer surplus is shown by the area:
A) oge
B) abe
C) ace
D) ghae

Ans: A Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 186 Subtopic: Maximum consumer and producer surplus Type: Graphic

305. Refer to the diagram above. Assuming a perfectly competitive market structure, what area represents the consumer surplus?
A) oge
B) pha
C) pge
D) ghae

Ans: C Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 186 Subtopic: Maximum consumer and producer surplus Type: Graphic

306. In long-run equilibrium, perfectly competitive markets:
A) minimize total cost.
B) maximize consumer surplus.
C) yield economic profits to most sellers.
D) inevitably degenerate into monopoly in increasing cost industries.

Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 186 Subtopic: Maximum consumer and producer surplus Type: Application

307. In a perfectly competitive industry at equilibrium price and quantity
   A) The producer surplus exceeds the consumer surplus.
   B) The sum of consumer and producer surplus is maximized.
   C) The consumer surplus exceeds producer surplus.
   D) The willingness of consumers to pay exceeds the opportunity cost of producing the product.

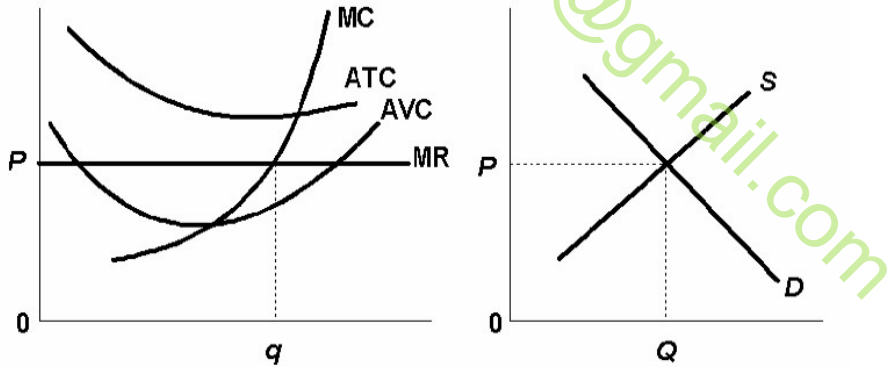
   Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
   Page: 186 Subtopic: Maximum consumer and producer surplus Type: Application

308. Assume that a decline in consumer demand occurs in a perfectly competitive industry which is initially in long-run equilibrium. We can:
   A) predict that the new price will be greater than the original price.
   B) predict that the new price will be less than the original price.
   C) predict that the new price will be the same as the original price.
   D) not compare the original and the new price without knowing about cost conditions in the industry.

   Ans: D Level: Difficult Main Topic: 7.6 Perfect competition and efficiency
   Page: 186-187 Subtopic: Dynamic adjustments Type: Application

   Use the following to answer question 309:

   These diagrams pertain to a perfectly competitive firm producing output q and the industry in which it operates.



309. Refer to the diagrams above. The predicted long-run adjustments in this industry might be offset by:
A) a decline in product demand.
B) an increase in resource prices.
C) a technological improvement in production methods.
D) none of the above.

Ans: C Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 186-187 Subtopic: Dynamic adjustments Type: Graphic

310. If there is a decrease in demand for a product in a perfectly competitive industry, it results in an industry:
A) contraction that will end when the price of the product is greater than its marginal cost.
B) contraction that will end when the price of the product is equal to its marginal cost.
C) expansion that will end when the price of the product is greater than its marginal cost.
D) expansion that will end when the price of the product is equal to its marginal cost.

Ans: B Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 186-187 Subtopic: Dynamic adjustments Type: Application

311. The highly efficient allocation of resources in perfect competition:
A) maximizes the profit for producers but does not maximize consumer satisfaction.
B) maximizes the consumer satisfaction but does not maximize producers' profits.
C) maximizes the profit for producers at the same time that maximizes consumer satisfaction.
D) maximizes the profit for producers but reduces the consumer satisfaction.

Ans: C Level: Easy Main Topic: 7.6 Perfect competition and efficiency
Page: 187 Subtopic: hand" revisited Type: Application

312. When prescription drugs lose their patent protection:
A) prices of the brand name drug and the generic drug have to be equal.
B) a pharmaceutical company can produce and sell the drug under a generic name.
C) to produce the generic drug, a pharmaceutical company needs the approval of the brand name producer.
D) he brand name drug will no longer be available on the market.

Ans: B Level: Easy Main Topic: Last Word Page: 187-188
Type: Application

313. The expiration of the patent for a brand name drug:
   A) will make the generic drugs available for consumers at a lower price and consequently increases the consumer surplus.
   B) will make the generic drugs available for consumers at a lower price and thus reduces the consumer surplus.
   C) will make the generic drugs available for consumers at a higher price and consequently increases the consumer surplus.
   D) will make the generic drugs available for consumers at a higher price and therefore reduces the consumer surplus.

   Ans: A Level: Easy Main Topic: Last Word Page: 186-187
   Type: Application

314. Perfect competition is a market structure characterized by a sole seller of a product or service.

   Ans: False Level: Easy Main Topic: 7.1 Four market structures
   Page: 163 Type: Definition

315. Competitive firms are price takers largely because of intensive advertising by their competitors.

   Ans: False Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 164 Type: Application

316. In a perfectly competitive industry, competition centers more on advertising and sales promotion than on price.

   Ans: False Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Type: Application

XXXXXX

317. Although individual perfectly competitive firms can influence the price of their product, these firms as a group cannot influence market price.

   Ans: False Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165Type: Application

318. The demand curves for firms in a perfectly competitive industry are perfectly elastic.

   Ans: True Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Type: Application

319. The total revenue curve of a competitive seller graphs as a straight, upward sloping line.

Ans: True Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Type: Application

320. Marginal revenue is the addition to total revenue resulting from the sale of one more unit of output.

Ans: True Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165 Type: Definition

321. Along the perfectly competitive firm's demand curve, average revenue is equal to marginal revenue.

Ans: True Level: Easy Main Topic: 7.2 Characteristics of perfect competition and the firm's demand curve Page: 165-166 Type: Application

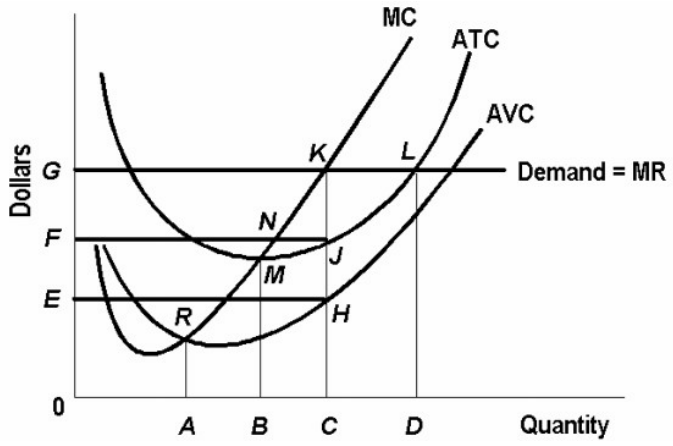
322. The break-even point means that the firm is realizing economic profits.

Ans: False Level: Easy Main Topic: 7.3 Profit maximization in the short run Page: 177 Type: Definition

323. In maximizing profit a firm will always produce that output where total revenues are at a maximum.

Ans: False Level: Easy Main Topic: 7.3 Profit maximization in the short run Page: 167-168 Type: Application

Use the following to answer questions 324-329:



324. Refer to the diagram above. This firm will maximize profits by producing output D.

Ans: False Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Type: Graphic

325. Refer to the diagram above. At the profit-maximizing output total revenue will be 0GLD.

Ans: False Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Type: Graphic

326. Refer to the diagram above. At output C production will result in an economic profit.

Ans: True Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Type: Graphic

327. Refer to the diagram above. At output C total variable cost is FGKJ.

Ans: False Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Type: Graphic

328. Refer to the diagram above. At output C average fixed cost is GF.

Ans: False Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Type: Graphic

329. Refer the diagram above. If demand fell to the level of FNJ, there would be no output at which the firm could realize an economic profit.

Ans: False Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Type: Graphic

330. A competitive firm will produce in the short run so long as its price exceeds its average fixed cost.

Ans: False Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Type: Application

331. Price and marginal revenue are identical for an individual perfectly competitive seller.

Ans: True Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Type: Application

332. If a perfectly competitive firm is producing a level of output greater than its profit-maximizing output, then marginal revenue is greater than marginal cost.

Ans: False Level: Moderate Main Topic: 7.3 Profit maximization in the short run
Page: 170-171 Type: Application

333. If MR > MC for a competitive firm, it should raise its price and increase its level of output.

Ans: False Level: Difficult Main Topic: 7.3 Profit maximization in the short run
Page: 168-181 Type: Application

334. In the short run a competitive firm will always choose to shut down if product price is less than the lowest attainable average total cost.

Ans: False Level: Easy Main Topic: 7.3 Profit maximization in the short run
Page: 182 Type: Application

335. In the short run, a competitive firm will not produce unless price is equal to average total costs.

Ans: False Level: Moderate Main Topic: 7.4 Marginal cost and short-run supply
Page: 184-185 Type: Application

336. The short-run supply curve slopes upward because producers must be compensated for rising marginal costs.

Ans: True Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
Page: 184-185 Type: Application

337. The demand curve for a perfectly competitive industry is perfectly elastic, but the demand curves faced by individual firms in such an industry are downward sloping.

Ans: False Level: Easy Main Topic: 7.4 Marginal cost and short-run supply
Page: 177-178 Type: Application

338. After all long-run adjustments have been completed, a firm in a competitive industry will produce that level of output where average total cost is at a minimum.

Ans: True Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 189 Type: Application

339. In long-run equilibrium, a competitive firm produces where P = MR = MC = minimum ATC and earns normal economic profits.

Ans: True Level: Moderate Main Topic: 7.5 Profit maximization in the long run
Page: 180-181 Type: Application

340. The long-run supply curve for an increasing-cost industry is downward sloping.

Ans: False Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 182-192 Type: Definition

341. The long-run supply curve for a competitive, decreasing-cost industry is downward sloping.

Ans: True Level: Easy Main Topic: 7.5 Profit maximization in the long run
Page: 192-193 Type: Application

342. Productive efficiency refers to long-run market conditions where marginal cost is equal to marginal revenue.

Ans: False Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 193-195 Type: Definition

343. Marginal cost is a measure of the alternative goods which society forgoes in using resources to produce an additional unit of some specific product.

Ans: True Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 195 Type: Application

344. Because the equilibrium position of a perfectly competitive seller entails an equality of price and marginal costs, competition produces to an efficient allocation of economic resources.

Ans: True Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 195 Type: Application

345. In the long run, perfect competition forces firms to produce at the minimum of average total cost and charge a price consistent with that cost.

Ans: True Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 195 Type: Application

346. An underallocation of resources will occur in a perfectly competitive industry at any level of output where price is greater than marginal cost.

Ans: True Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 195 Type: Application

347. The operation of the "invisible hand" means the pursuit of private interests promotes social interests in perfect competition.

Ans: True Level: Moderate Main Topic: 7.6 Perfect competition and efficiency
Page: 196 Type: Application

348. When a generic drug becomes available, the price of the drug falls, and consumer surplus rises.

Ans: True Level: Easy Main Topic: Last Word Page: 197 Type: Application

CHAPTER 8

Monopoly

Chapter 8 Monopoly

1. Which of the following approximates a monopoly?
   A) the foreign exchange market
   B) the Winnipeg wheat market
   C) the diamond market
   D) the soft drink market

   Ans: C Level: Easy Main Topic: 8.1 Characteristics of monopoly
   Page: 192-193 Subtopic: Examples of monopoly Type: Application

2. Which of the following is a characteristic of monopoly?
   A) close substitute products
   B) barriers to entry
   C) the absence of market power
   D) "price taking"

   Ans: B Level: Easy Main Topic: 8.1 Characteristics of monopoly
   Page: 192-193 Subtopic: Examples of monopoly Type: Application

3. Monopoly means:
   A) any market in which the demand curve to the firm is downward sloping.
   B) a standardized product being produced by many firms.
   C) a large number of firms producing a differentiated product.
   D) a single firm producing a product for which there are no close substitutes.

   Ans: D Level: Easy Main Topic: 8.1 Characteristics of monopoly
   Page: 192-193 Subtopic: Examples of monopoly Type: Definition

4. Which of the following is correct?
   A) Both perfect competitive and monopolistic firms are "price takers."
   B) Both perfect competitive and monopolistic firms are "price makers."
   C) A perfect competitive firm is a "price taker," while a monopolist is a "price maker."
   D) A perfect competitive firm is a "price maker," while a monopolist is a "price taker."

   Ans: C Level: Easy Main Topic: 8.1 Characteristics of monopoly
   Page: 192-193 Subtopic: Examples of monopoly Type: Definition

5. The dual objective of studying the monopolistic market structure is:
   A) to know about this market structure as well as understanding monopolistic-Competition and oligopolistic market structures.
   B) to be able to compare it with the other extreme namely, perfect competition.
   C) to be able to study the behaviour of some of the industries characterized by that.
   D) All of the above.

   Ans: D Level: Easy Main Topic: 8.1 Characteristics of monopoly
   Page: 192-193 Subtopic: Dual objectives of the study of monopoly
   Type: Application

6. A monopolist is:
   A) any firm realizing all existing economies of scale.
   B) any firm whose demand curve is downward sloping.
   C) any firm which can engage in price discrimination.
   D) a one-firm industry.

   Ans: D Level: Easy Main Topic: 8.1 Characteristics of monopoly
   Page: 193-194 Subtopic: Barriers to entry Type: Definition

7. Barriers to entering an industry:
   A) are justified because they result in allocative efficiency.
   B) are justified because they result in productive efficiency.
   C) are the basis for monopoly.
   D) apply only to ly monopolistic industries.

   Ans: C Level: Easy Main Topic: 8.1 Characteristics of monopoly
   Page: 193-194 Subtopic: Barriers to entry Type: Application

8. Which of the following is not a barrier to entry?
   A) patents
   B) X-inefficiency
   C) economies of scale
   D) ownership of essential resources

   Ans: B Level: Easy Main Topic: 8.1 Characteristics of monopoly
   Page: 194-195 Subtopic: Barriers to entry Type: Application

9. What do economies of scale, the ownership of essential raw materials, and patents have in common?
   A) They must all be present before price discrimination can be practiced.
   B) They are all barriers to entry.
   C) They all help explain why a monopolist's demand and marginal revenue curves coincide.
   D) They all help explain why the long-run average cost curve is U-shaped.

   Ans: B Level: Easy Main Topic: 8.1 Characteristics of monopoly
   Page: 194-195 Subtopic: Barriers to entry Type: Application

10. Barriers to entry:
   A) exist in economic theory but not in the real world.
   B) usually result in perfect competition.
   C) can result from government regulation.
   D) are typically the result of wrongdoing on the part of a firm.

   Ans: C Level: Easy Main Topic: 8.1 Characteristics of monopoly Page: 195
   Subtopic: Barriers to entry Type: Application

11. Which is a barrier to entry?
   A) patents
   B) revenue maximization
   C) profit maximization
   D) elastic product demand

   Ans: A Level: Easy Main Topic: 8.1 Characteristics of monopoly Page: 195
   Subtopic: Barriers to entry Type: Application

12. One of the major barriers to entry under monopoly arises from:
   A) the availability of close substitutes for a product.
   B) ownership of essential resources.
   C) the price taking ability of the firm.
   D) diseconomies of scale.

   Ans: B Level: Easy Main Topic: 8.1 Characteristics of monopoly Page: 195
   Subtopic: Barriers to entry Type: Application

13. A monopolistic industry:
    A) has no entry barriers.
    B) has a downward sloping demand curve.
    C) produces a product or service for which there are many close substitutes.
    D) earns only a normal profit in the long run.

    Ans: B Level: Easy Main Topic: 8.1 Characteristics of monopoly Page: 196
    Subtopic: Monopoly demand Type: Application

14. The demand curve faced by a monopolist:
    A) may be either more or less elastic than that faced by a single perfect competitive firm.
    B) is less elastic than that faced by a single perfect competitive firm.
    C) has the same elasticity as that faced by a single perfect competitive firm.
    D) is more elastic than that faced by a single perfect competitive firm.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 196 Subtopic: Monopoly demand Type: Application

15. The monopolist's demand curve:
    A) is the industry demand curve.
    B) shows a direct or positive relationship between price and quantity demanded.
    C) tends to be inelastic at high prices and elastic at low prices.
    D) is identical to its marginal revenue curve.

    Ans: A Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 196 Subtopic: Monopoly demand Type: Application

16. The demand curve confronting a monopolist is:
    A) horizontal.
    B) the same as the industry's demand curve.
    C) more elastic than the demand curve confronting a competitive firm.
    D) derived by vertically summing the individual demand curves for the buyers.

    Ans: B Level: Easy Main Topic: 8.1 Characteristics of monopoly Page: 196
    Subtopic: Monopoly demand Type: Application

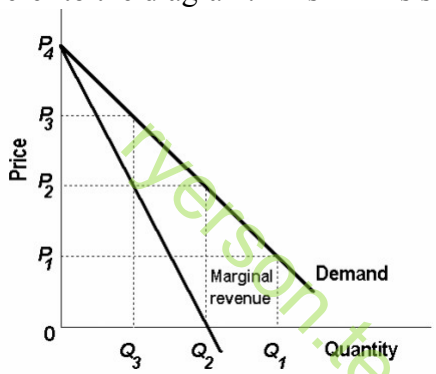
17. The monopolist's demand curve:
    A) is less elastic than a perfect competitive firm's demand curve.
    B) is perfectly elastic.
    C) coincides with its marginal revenue curve.
    D) is perfectly inelastic.

    Ans: A Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 196 Subtopic: Monopoly demand Type: Application

18. Which of the following is characteristic of a monopolist's demand curve?
    A) Average revenue is less than price.
    B) Its elasticity is 1 at all levels of output.
    C) Price and marginal revenue are equal at all levels of output.
    D) It is the same as the market demand curve.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 196 Subtopic: Monopoly demand Type: Application

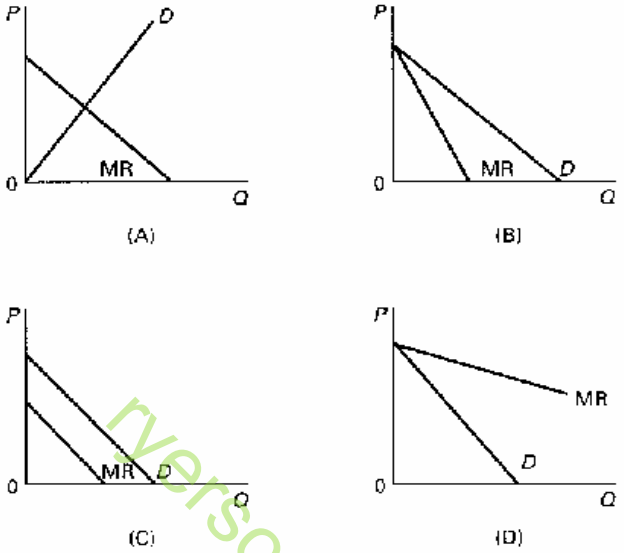
19. Refer to the diagram. This firm is selling in:



    A) a market in which there are an extremely large number of other firms producing the same product.
    B) an imperfectly competitive market.
    C) a market in which demand is elastic at all prices.
    D) a perfect competitive market.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 196-197 Subtopic: Monopoly demand Type: Graphic

20. Which of the graphs below shows the correct relationship between demand and marginal revenue?



A) A
B) B
C) C
D) D

Ans: B Level: Easy Main Topic: 8.1 Characteristics of monopoly
Page: 196 -197 Subtopic: Monopoly demand Type: Graphic

21. The marginal revenue curve for a monopolist:
A) is a straight, upward sloping curve.
B) rises at first, reaches a maximum, and then declines.
C) is positive at low levels of output, then becomes negative at high output levels.
D) is a straight line, parallel to the horizontal axis.

Ans: C Level: Moderate Main Topic: 8.1 Characteristics of monopoly
Page: 197 Subtopic: Monopoly demand Type: Application

22. At which of the following combinations of price and marginal revenue (P, MR) is the price elasticity of demand greater than 1?
A)P = 15, MR = 8 B)
P = 12, MR = 0 C)
P = 8, MR = -2 D)
P = 4, MR = -4

Ans: A Level: Difficult Main Topic: 8.1 Characteristics of monopoly Page: 197
Subtopic: Monopoly demand Type: Application

23. The monopolist that is non-discriminating must decrease price on all units of a product sold in order to sell additional units. This explains why:
    A) there are barriers to entry in monopoly.
    B) a monopoly has a perfectly elastic demand curve.
    C) marginal revenue is less than average revenue.
    D) total revenues are greater than total costs at the profit maximizing level of output.

    Ans: C Level: Difficult Main Topic: 8.1 Characteristics of monopoly Page: 197
    Subtopic: Monopoly demand Type: Application

24. A monopolist will find that marginal revenue:
    A) exceeds average revenue or price.
    B) is identical to price.
    C) is sometimes greater and sometimes less than price.
    D) is less than average revenue or price.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Application

25. If a non-discriminating imperfect competitive firm is selling its 100th unit of output for $35, its marginal revenue:
    A) may be either greater or less than $35.
    B) will also be $35.
    C) will be less than $35.
    D) will be greater than $35.

    Ans: C Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Application

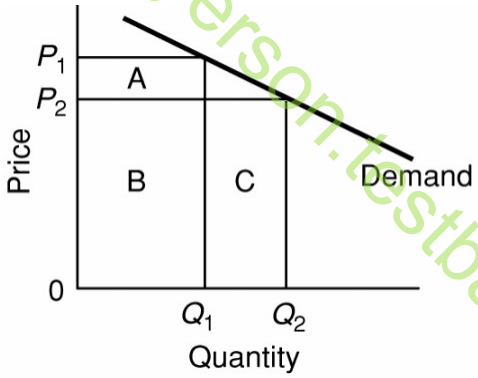
26. A monopolist's demand curve:
    A) is perfectly inelastic.
    B) coincides with its marginal revenue curve.
    C) lies below its marginal revenue curve.
    D) lies above its marginal revenue curve.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Application

27. For an imperfect competitive firm:
    A) total revenue is a straight, upward sloping line because a firm's sales are independent of product price.
    B) the marginal revenue curve lies above the demand curve because any reduction in price applies to all units sold.
    C) the marginal revenue curve lies below the demand curve because any reduction in price applies only to the extra unit sold all units sold.
    D) the marginal revenue curve lies below the demand curve because any reduction in price applies to all units sold.

    Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly Page: 197
    Subtopic: Monopoly demand Type: Application

    Use the following to answer questions 28-30:



28. Refer to the diagram above. If price is reduced from P_1 to P_2, total revenue will:
    A) increase by A minus C.
    B) increase by C minus A.
    C) decrease by A minus C.
    D) decrease by C minus A.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Graphic

29. Refer to the diagram above. The quantity difference between areas A and C for the indicated price reduction measures:
    A) marginal cost.
    B) marginal revenue.
    C) monopoly price.
    D) a welfare or efficiency loss.

    Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly Page: 197
    Subtopic: Monopoly demand Type: Graphic

30. The diagram above implies that whenever a firm's demand curve is downward sloping:
    A) price discrimination is not possible.
    B) monopolists will be more efficient than competitors.
    C) the demand and marginal revenue curves will coincide.
    D) marginal revenue is less than price.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Graphic

31. Refer to the below data. The marginal revenue obtained from selling the third unit of output:

Price	Quantitydemanded
$7	1
6	2
5	3
4	4
3	5

    A) is $3.
    B) is $1.
    C) is $6.
    D) is $5.

    Ans: A Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Calculation

32. A monopolistic firm has a sales schedule such that it can sell 10 prefabricated garages per week at $10,000 each, but if it restricts its output to 9 per week it can sell these at $11,000 each. The marginal revenue of the tenth unit of sales per week is:
    A) $900.
    B) $9,000.
    C) $10,000.
    D) $1,000.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Calculation

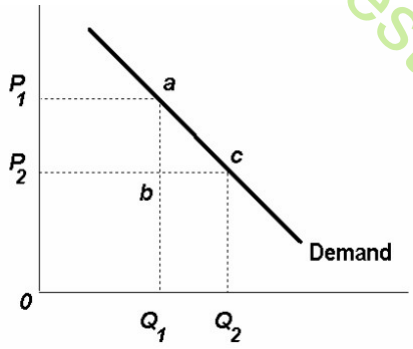
33. With respect to the monopolist's demand curve it can be said that:
    A) the stronger the barriers to entry, the more elastic is the monopolist's demand curve.
    B) price exceeds marginal revenue at all outputs greater than 1.
    C) demand is perfectly inelastic.
    D) marginal revenue equals price at all outputs.

    Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly Page: 197
    Subtopic: Monopoly demand Type: Application

34. Price exceeds marginal revenue for the monopolist because the:
    A) law of diminishing returns is inapplicable.
    B) demand curve is downward sloping.
    C) monopolist produces a smaller output than would a perfect competitive firm.
    D) demand curve lies below the marginal revenue curve.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Application

    Use the following to answer questions 35-36:



35. If the firm in the diagram above lowers price from P_1 to P_2, it will:
    A) lose P_1P_2ba in revenue from the price cut but increase revenue by Q_1bcQ_2 from the increase in sales.
    B) lose P_1P_2ca in revenue from the price cut but increase revenue by Q_1acQ_2 from the increase in sales.
    C) incur a decline in total revenue because it is operating on the elastic segment of the demand curve.
    D) incur an increase in total revenue because it is operating on the inelastic segment of the demand curve.

    Ans: A Level: Difficult Main Topic: 8.1 Characteristics of monopoly Page: 197
    Subtopic: Monopoly demand Type: Graphic

36. The quantitative difference between areas Q_1bcQ_2 and P_1P_2ba, in the diagram above, measures:
    A) marginal cost.
    B) total revenue.
    C) marginal revenue.
    D) average revenue.

    Ans: C Level: Difficult Main Topic: 8.1 Characteristics of monopoly Page: 197
    Subtopic: Monopoly demand Type: Graphic

37. A monopolist can sell 20 toys per day for $8.00 each. To sell 21 toys per day, the price must be cut to $7.00. The marginal revenue of the 21st toy is:
    A) -$10.
    B) -$13.
    C) -$18.
    D) -$21.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Calculation

38. A monopolist can sell 20 units of a product per day at a unit price of $10. To sell another unit it must reduce price to $9. The marginal revenue of the 21st unit is:
    A) -$11.
    B) -$10.
    C) $21.
    D) $189.

    Ans: A Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Calculation

39. A monopolist can sell 10 units at $12 per unit and 9 units at $13 per unit. The marginal revenue from the 10th unit is:
    A) $1.
    B) $3.
    C) $12.
    D) $120.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Calculation

40. For a monopolist marginal revenue is less than price because:
    A) the monopolist's demand curve is perfectly elastic.
    B) the monopolist's demand curve is perfectly inelastic.
    C) when a monopolist lowers price to sell more output, the lower price applies to all units sold.
    D) the monopolist's total revenue curve is linear and slopes upward to the right.

    Ans: C Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Application

41. Suppose a monopolist is charging a price of $12 and the associated marginal revenue is $9. We thus know that:
    A) demand is inelastic at this price.
    B) total revenue is increasing.
    C) the firm is maximizing profits.
    D) total revenue is at a maximum.

    Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly Page: 197
    Subtopic: Monopoly demand Type: Application

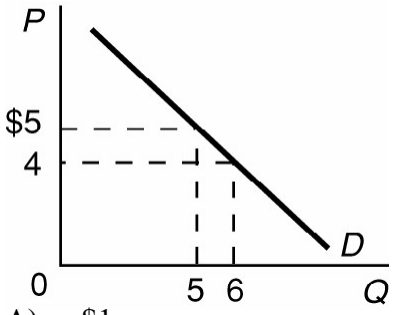
42. A monopolist is selling 6 units at a price of $12. If the marginal revenue of the seventh unit is $5, then:
    A) price of the seventh unit is $10.
    B) price of the seventh unit is $11.
    C) price of the seventh unit is greater than $12.
    D) firm's demand curve is perfectly elastic.

    Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly Page: 197
    Subtopic: Monopoly demand Type: Calculation

43. The vertical distance between the horizontal axis and any point on a monopolist's demand curve measures:
    A) the quantity demanded.
    B) product price and average revenue.
    C) total revenue.
    D) product price and marginal revenue.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 Subtopic: Monopoly demand Type: Application

44. The diagram indicates that the marginal revenue of the sixth unit of output is:



A) $1.
B) -$1.
C) $4.
D) $24.

Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
Page: 197 Subtopic: Monopoly demand Type: Calculation

45. A monopolist finds that it can sell its fiftieth unit of output for $50. We can surmise that the marginal:
A) cost of the fiftieth unit is also $50.
B) revenue of the fiftieth unit is also $50.
C) revenue of the fiftieth unit is less than $50.
D) revenue of the fiftieth unit is greater than $50.

Ans: C Level: Moderate Main Topic: 8.1 Characteristics of monopoly
Page: 197 Subtopic: Monopoly demand Type: Application

46. Below is the demand schedule facing Nina, a monopolist selling baskets. What is the change in total revenue if she lowers the price from $16 to $14?

Price	Number of baskets sold
$20	3
$18	5
$16	7
$14	10
$12	15
$10	30

A) $2
B) $14
C) $20
D) $28

Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
Page: 197 Subtopic: Monopoly demand Type: Calculation

47. Given a downward sloping linear demand curve, when total revenue is decreasing, marginal revenue is:
    A) positive and demand is elastic.
    B) negative and demand is elastic.
    C) positive and demand is inelastic.
    D) negative and demand is inelastic.

    Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

48. For an imperfect competitive firm:
    A) the marginal revenue curve lies above the demand curve.
    B) the demand and marginal revenue curves coincide.
    C) the demand curve intersects the horizontal axis where total revenue is at a maximum.
    D) marginal revenue will become zero at that output where total revenue is at a maximum.

    Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

    Use the following to answer questions 49-51:

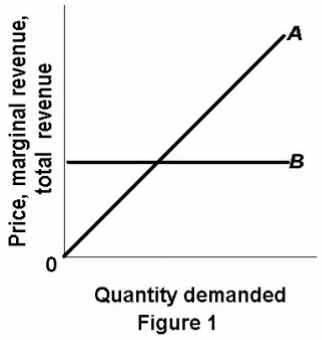


Figure 1

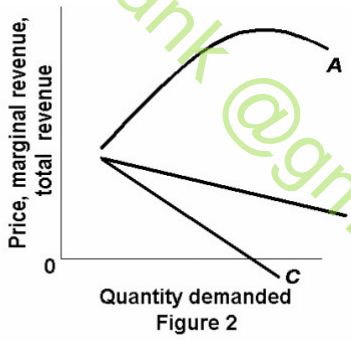


Figure 2

49. Refer to the two diagrams above for individual firms. Figure 1 pertains to:
    A) an imperfect competitive firm.
    B) a perfect competitive firm.
    C) an oligopolist.
    D) a monopolist.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197 -198 Subtopic: Monopoly demand Type: Graphic

50. Refer to the two diagrams above for individual firms. Figure 2 pertains to:
    A) a market characterized by government regulation of price and output.
    B) either an imperfect competitive or a perfect competitive seller.
    C) a perfect competitive seller.
    D) an imperfect competitive seller.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Graphic

51. Refer to the two diagrams above for individual firms. In Figure 2 the firm's demand and marginal revenue curves are represented by:
    A) lines B and C respectively.
    B) lines A and C respectively.
    C) lines A and B respectively.
    D) line B.

    Ans: A Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Graphic

52. Because the monopolist's demand curve is downward sloping:
    A) MR will equal price.
    B) price must be lowered to sell more output.
    C) the elasticity coefficient will increase as price is lowered.
    D) its supply curve will also be downward sloping.

    Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

53. In moving down the elastic segment of the monopolist's demand curve, total revenue is:
    A) increasing, and marginal revenue is negative.
    B) decreasing, and marginal revenue is positive.
    C) decreasing, and marginal revenue is negative.
    D) increasing, and marginal revenue is positive.

    Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

54. When the monopolist's demand curve is elastic, marginal revenue:
    A) may be either positive or negative.
    B) is zero.
    C) is negative.
    D) is positive.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

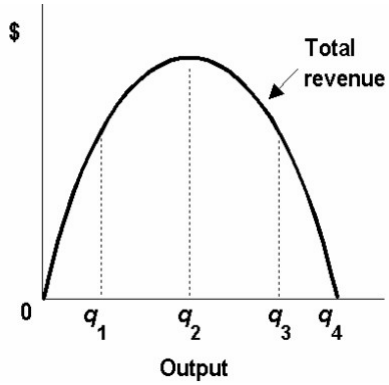
55. When total revenue is increasing:
    A) marginal revenue may be either positive or negative.
    B) the demand curve is relatively inelastic.
    C) marginal revenue is negative.
    D) marginal revenue is positive.

    Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

56. For a monopolist the relationship between total revenue and marginal revenue is such that:
    A) marginal revenue is positive when total revenue is at a maximum.
    B) total revenue is positive when marginal revenue is increasing, but total revenue becomes negative when marginal revenue is decreasing.
    C) marginal revenue is positive when total revenue is increasing, but marginal revenue becomes negative when total revenue is decreasing.
    D) marginal revenue is positive so long as total revenue is positive.

    Ans: C Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

    Use the following to answer questions 57-59:



57. Refer to the diagram above for a monopolist. Demand is elastic:
    A) for all levels of output less than q_2.
    B) only for outputs greater than q_4.
    C) in the q_1q_3 output range.
    D) for all levels of output greater than q_2.

    Ans: A Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Graphic

58. Refer to the diagram above for a monopolist. Marginal revenue will be zero at output:
    A) q_4.
    B) q_2.
    C) q_3.
    D) q_1.

    Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Graphic

59. Refer to the diagram above for a monopolist. The profit-seeking monopolist will:
    A) always produce at output q_2.
    B) always produce more than q_2.
    C) never produce an output larger than q_2.
    D) never produce an output larger than q_1.

    Ans: C Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Graphic

60. Assuming no change in product demand, a monopolist:
    A) can increase price and increase sales simultaneously because it dominates the market.
    B) adds an amount to total revenue which is equal to the price of incremental sales.
    C) should produce in the range where marginal revenue is negative.
    D) must lower price to increase sales.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

61. If a monopolist is operating in a range of output where demand is elastic:
    A) it cannot possibly be maximizing profits.
    B) marginal revenue will be positive but declining.
    C) marginal revenue will be positive and rising.
    D) total revenue will be declining.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

62. If a monopolist decides to sell one more unit of output, the marginal revenue associated with that unit will be:
    A) equal to its price.
    B) the price at which that unit is sold less the price reductions which apply to all other units of output.
    C) the price at which that unit is sold plus the price increases which apply to all other units of output.
    D) indeterminate unless marginal cost data are known.

    Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 197-198 Subtopic: Monopoly demand Type: Application

63. Assuming a monopolist's demand curve is downward sloping, its total revenue:
    A) is rising.
    B) is falling.
    C) may be either rising or falling.
    D) must be negative.

    Ans: C Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

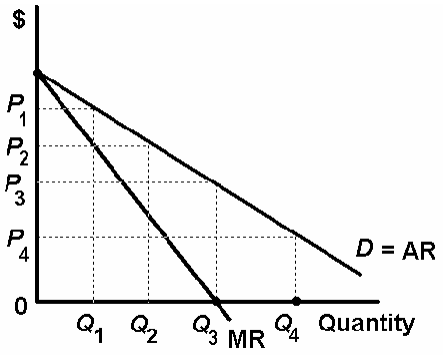
64. When a firm is on the inelastic segment of its demand curve, it can:
    A) increase total revenue by reducing price.
    B) decrease total costs by decreasing price.
    C) increase profits by increasing price.
    D) increase total revenue by more than the increase in total cost by increasing price.

    Ans: C Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

65. If a monopolist is operating at an output level where marginal revenue is positive, the firm:
    A) has maximized total revenues.
    B) could raise revenues by raising prices.
    C) can always increase profits by lowering its price.
    D) is operating on the elastic portion of its demand curve.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

Use the following to answer questions 66-70:



66. Refer to the above graph showing the short-run revenue curves for a monopolist. Total revenue will be greatest at what output level?
A) Q_1
B) Q_2
C) Q_3
D) Q_4

Ans: C Level: Difficult Main Topic: 8.1 Characteristics of monopoly
Page: 198-199 Subtopic: Monopoly demand Type: Graphic

67. Refer to the above graph showing the short-run revenue curves for a monopolist. Demand is unit elastic at what price?
A) P_1
B) P_2
C) P_4
D) P_3

Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
Page: 198-199 Subtopic: Monopoly demand Type: Graphic

68. Refer to the above graph showing the short-run revenue curves for a monopolist. At what output level is demand inelastic?
A) Q_1
B) Q_2
C) Q_3
D) Q_4

Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
Page: 198-199 Subtopic: Monopoly demand Type: Graphic

69. Refer to the above graph showing the short-run revenue curves for a monopolist. The elastic portion of the demand curve ranges from:
    A) 0 to Q_3.
    B) 0 to Q_2.
    C) 0 to Q_1.
    D) Q_3 to Q_5.

    Ans: A Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

70. Refer to the above graph showing the short-run revenue curves for a monopolist. What price should be charged in order to maximize total revenue?
    A) P_1
    B) P_2
    C) P_3
    D) P_4

    Ans: C Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

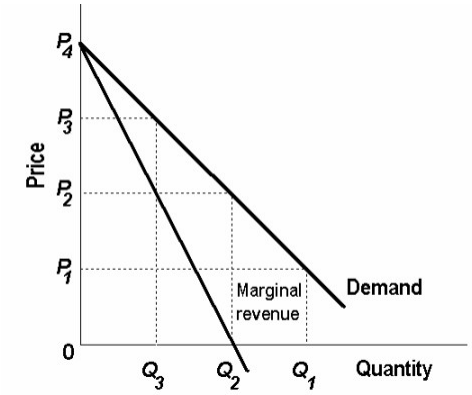
71. Refer to the following data. At the point where 3 units are being sold, the coefficient of price elasticity of demand:

Price	Quantitydemanded
$7	1
6	2
5	3
4	4
3	5

    A) cannot be estimated.
    B) suggests that the market is perfectly competitive.
    C) is less than unity (one).
    D) is greater than unity (one).

    Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Calculation

Use the following to answer questions 72-73:



72. Refer to the diagram above. Demand is relatively elastic:
A) in the P_2P_1 price range.
B) in the P_2P_4 price range.
C) in the $0P_1$ price range.
D) only at price P_2.

Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly
Page: 198-199 Subtopic: Monopoly demand Type: Graphic

73. Refer to the diagram above. Demand is relatively inelastic:
A) at price P_3.
B) at any price below P_2.
C) in the P_2P_4 price range.
D) in the P_2P_3 price range.

Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly
Page: 198-199 Subtopic: Monopoly demand Type: Graphic

74. The monopolist's demand curve is relatively elastic:
A) in the price range where total revenue is declining.
B) at all points where the demand curve lies above the horizontal axis.
C) in the price range where marginal revenue is negative.
D) in the price range where marginal revenue is positive.

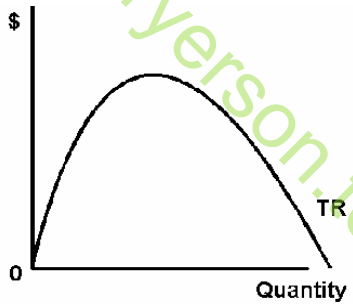
Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
Page: 198-199 Subtopic: Monopoly demand Type: Application

75. At which combination of price and marginal revenue would the price elasticity of demand be inelastic?
    A) price equals $70, marginal revenue equals $10
    B) price equals $60, marginal revenue equals $5
    C) price equals $50, marginal revenue equals $0
    D) price equals $40, marginal revenue equals -$5

    Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Calculation

    Use the following to answer questions 76-82:

    The following graph shows a total revenue curve for a monopolist.



76. Refer to the graph above. The firm's marginal revenue curve is:
    A) downward sloping.
    B) constant.
    C) upward sloping.
    D) U-shaped.

    Ans: A Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

77. Refer to the graph above. When the total revenue curve reaches a maximum, marginal revenue is:
    A) positive.
    B) negative.
    C) zero.
    D) greater than price at that level of output.

    Ans: C Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

78. Refer to the graph above. When the revenue curve is rising as output expands, marginal revenue is:
    A) positive.
    B) negative.
    C) zero.
    D) greater than price at that output level.

    Ans: A Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

79. Refer to the graph above. When total revenue rises as output increases, demand is:
    A) elastic.
    B) inelastic.
    C) perfectly inelastic.
    D) perfectly elastic.

    Ans: A Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

80. Refer to the graph above. When total revenue declines as output expands, demand is:
    A) elastic.
    B) inelastic.
    C) perfectly inelastic.
    D) perfectly elastic.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

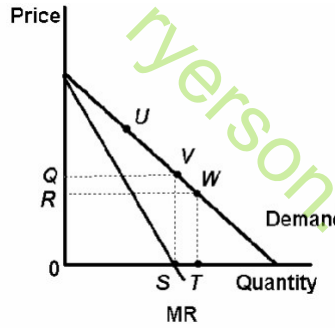
81. Refer to the graph above. When total revenue falls as output expands, marginal revenue is:
    A) positive.
    B) negative.
    C) zero.
    D) greater than demand at that output level.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

82. Refer to the graph above. The profit-maximizing firm will produce in that output level where total revenue is:
    A) rising.
    B) falling.
    C) rising and falling.
    D) zero.

    Ans: A Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

83. The graph below shows a linear demand curve. Which of the following statements is not correct?



    A) The demand curve has unit price elasticity at V.
    B) The area 0QVS is greater than the area 0RWT.
    C) The price elasticity of demand is greater at U than at V.
    D) The price elasticity of demand is greater at W than at V.

    Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

84. A monopoly firm will never charge a price in the inelastic range of its demand curve because lowering price to get into this region will:
    A) increase total revenue, increase total cost, and decrease profit.
    B) decrease total revenue, increase total cost, and decrease profit.
    C) increase total revenue, decrease total cost, and decrease profit.
    D) decrease total revenue, total cost, and profit.

    Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

85. The region of demand in which the monopolist will choose a price-output combination will be:
    A) inelastic because as price declines and output increases, total revenue will increase.
    B) inelastic because as price declines and output increases, total revenue will decrease.
    C) elastic because as price declines and output increases, total revenue will decrease.
    D) elastic because as price declines and output increases, total revenue will increase.

    Ans: D Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

86. A monopolist:
    A) will never produce in the output range where marginal revenue is positive.
    B) will never produce in the output range where demand is inelastic.
    C) will never produce in the output range where demand is elastic.
    D) may produce where demand is either elastic or inelastic, depending on the level of production costs.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

87. Assume a monopolist is currently operating at a price-quantity combination on the inelastic segment of its demand curve. If the monopolist is seeking maximum profits, it should:
    A) retain its current price-quantity combination.
    B) increase both price and quantity sold.
    C) charge a higher price.
    D) charge a lower price.

    Ans: C Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

88. A monopolist should never produce in the:
    A) elastic segment of its demand curve because it can increase total revenue and reduce total cost by lowering price.
    B) inelastic segment of its demand curve because it can increase total revenue and reduce total cost by increasing price.
    C) inelastic segment of its demand curve because it can always increase total revenue by more than it increases total cost by reducing price.
    D) segment of its demand curve where the price elasticity coefficient is greater than one.

    Ans: B Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

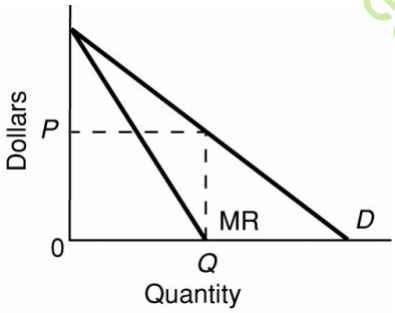
89. If a monopolist were to produce in the inelastic segment of its demand curve:
    A) total revenue would be at a maximum.
    B) marginal revenue would be negative.
    C) the firm would be maximizing profits.
    D) it would necessarily incur a loss.

    Ans: D Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

90. A profit-maximizing monopolist will set its price:
    A) as far above ATC as possible.
    B) along the elastic portion of its demand curve.
    C) where the marginal cost curve intersects the demand curve.
    D) as close as possible to the minimum point of ATC.

    Ans: B Level: Moderate Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Application

91. Assume a monopolist is charging price P and selling output Q as shown on the diagram. On the basis of this information we can say that:



    A) if marginal costs were somehow zero, the firm would be maximizing its total revenue.
    B) if marginal costs were positive the firm would increase profits by reducing price and selling more output.
    C) the firm is producing where the price elasticity coefficient is less than one.
    D) the firm is a "price taker."

    Ans: A Level: Difficult Main Topic: 8.1 Characteristics of monopoly
    Page: 198-199 Subtopic: Monopoly demand Type: Graphic

Use the following to answer questions 92-93:

The following demand and cost data is for a monopolist.

Demand data		Cost data	
Price	Quantity demanded	Output	Total cost
$2.75	3	3	$4.00
2.50	4	4	4.50
2.25	5	5	4.75
2.00	6	6	5.75
1.75	7	7	7.75

92. Refer to the table above. Equilibrium price of the monopolist will be:
A) $2.50.
B) $2.25.
C) $2.00.
D) $1.75.

Ans: B Level: Difficult Main Topic: 8.2 Output and price determination
Page: 199-200 Subtopic: Cost data Type: Calculation

93. Refer to the table above. The monopolist will realize a:
A) profit of $10.00.
B) profit of $6.50.
C) profit of $4.50.
D) loss of $7.23.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-200 Subtopic: Cost data Type: Calculation

Use the following to answer questions 94-96:

The following demand and cost data for a monopolist:

DemandData		CostData	
Price	Quantitydemand	Output	Total cost
$5.50	3	3	$ 5
5.00	4	4	6
4.50	5	5	6.50
3.85	6	6	7.50
3.35	7	7	9
2.90	8	8	11
2.50	9	9	14

94. Refer to the data above. Equilibrium price for the monopolist will be:
A) $5.00
B) $2.90.
C) $3.35.
D) $4.50.

Ans: D Level: Difficult Main Topic: 8.2 Output and price determination
Page: 199-200 Subtopic: Cost data Type: Calculation

95. Refer to the data above. The equilibrium level of output will be:
A) 4 units.
B) 7 units.
C) 6 units.
D) 5 units.

Ans: D Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-200 Subtopic: Cost data Type: Calculation

96. Refer to the data above. The monopolist will realize a:
A) profit of $8.50.
B) profit of $7.50.
C) profit of $16.
D) loss of $14.

Ans: C Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-200 Subtopic: Cost data Type: Calculation

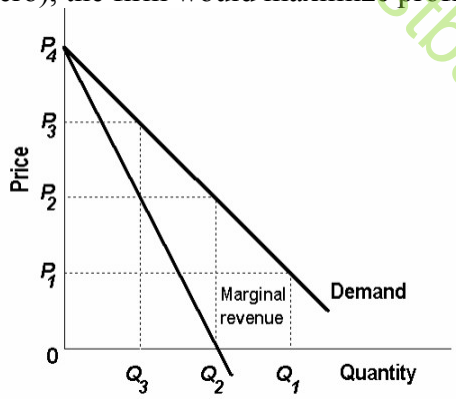
97. The MR = MC rule:
    A) applies only to perfect competition.
    B) applies only to monopoly.
    C) does not apply to monopoly because price exceeds marginal revenue.
    D) applies both to monopoly and perfect competition.

    Ans: D Level: Easy Main Topic: 8.2 Output and price determination
    Page: 199-201 Subtopic: MR=MC Rule Type: Application

98. A monopolist will maximize profits by producing that output at which marginal cost is equal to:
    A) average total cost.
    B) marginal revenue.
    C) average variable cost.
    D) average cost.

    Ans: B Level: Easy Main Topic: 8.2 Output and price determination
    Page: 199-201 Subtopic: MR=MC Rule Type: Application

99. If the product was somehow costless (that is, the total cost of any level of output was zero), the firm would maximize profits by:



    A) selling the product at the highest possible price at which a positive quantity will be demanded.
    B) producing Q_1 units and charging a price of P_1.
    C) producing Q_3 units and charging a price of P_3.
    D) producing Q_2 units and charging a price of P_2.

    Ans: D Level: Difficult Main Topic: 8.2 Output and price determination
    Page: 199-201 Subtopic: MR=MC Rule Type: Graphic

100. In equilibrium which of the following conditions are common to both unregulated monopoly and to perfect competition?
A) MC = P
B) MC = ATC
C) MR = MC
D) P = MR

Ans: C Level: Easy Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Formula

101. An unregulated monopolist will maximize profits by producing that output at which:
A) MR = MC.
B) P = ATC.
C) P = MC.
D) MC = AC.

Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Formula

102. The short-run profit maximizing position of an unregulated monopolist is characterized by:
A) P = minimum ATC.
B) MR = MC.
C) P = MC.
D) MC = ATC.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Formula

103. Perfect competitive firms and monopolists are similar in that:
A) the demand curves of both are perfectly elastic.
B) significant entry barriers are common to both.
C) both are price makers.
D) both maximize profit where MR = MC.

Ans: D Level: Easy Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Application

104. Under which of the following situations would a monopolist increase profits by lowering price (and increasing output):
A) if it discovered that it was producing where MC = MR
B) if it discovered that it was producing where its MC curve intersects its demand curve
C) if it discovered that it was producing where MC < MR
D) under none of the above circumstances because a monopolist would never lower price

Ans: C Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Application

105. Suppose that a monopolist calculates that at present output and sales levels, marginal revenue is $1.00 and marginal cost is $2.00. He or she could maximize profits or minimize losses by:
A) decreasing price and increasing output.
B) increasing price and decreasing output.
C) decreasing price and leaving output unchanged.
D) decreasing output and leaving price unchanged.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Application

106. Suppose that a monopolist calculates that at present output and sales, marginal cost is $4.00 and marginal revenue is $3.00. He or she could maximize profits by:
A) decreasing price and increasing output.
B) increasing price and decreasing output.
C) decreasing price and leaving output unchanged.
D) decreasing output and leaving prices unchanged.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Application

107. Using the information below, the monopolist will select its profit-maximizing level of output somewhere within the:

The following table shows the demand schedule facing a monopolist:

P	Qd
$10	1
7	2
5	3
3	4
1	5

A) 3-5 unit range of output.
B) 1-3 unit range of output.
C) 1-4 unit range of output.
D) 2-4 unit range of output.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Calculation

108. The data below relate to a monopolist and the product it produces. What is the profit-maximizing output and price for this monopolist?

P	Q	TC
$22	0	$20
20	1	24
18	2	27
15	3	32
14	4	40
12	5	49
10	6	59

A) P = $14; Q = 4
B) P = $15; Q = 3
C) P = $12; Q = 5
D) P = $18; Q = 2

Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Calculation

109. A monopolist is producing an output such that ATC = $4, P = $5, MC = $2, and MR = $3. This firm is realizing:
A) a loss which could be reduced by producing more output.
B) a loss which could be reduced by producing less output.
C) an economic profit which could be increased by producing more output.
D) an economic profit which could be increased by producing less output.

Ans: C Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Application

110. If a monopolist's marginal revenue is $3.00 and its marginal cost is $4.50, it will increase its profits by:
A) reducing output and raising price.
B) reducing both output and price.
C) increasing both price and output.
D) raising price while keeping output unchanged.

Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Application

Use the following to answer question 111:

The following data show the relationship between output, total costs, and total revenue for a monopoly.

Output	TC	TR
50	$ 750	$1,000
60	800	1,100
70	950	1,250
80	1,200	1,450
90	1,300	1,500

111. Within which of the following ranges of output will the firm earn maximum economic profits?
A) 50 to 60 units
B) 60 to 70 units
C) 70 to 80 units
D) 80 to 90 units

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Calculation

Use the following to answer questions 112-114:

The following is the information regarding the demand and cost of production for a monopolist:

Output	Total cost	Product price
0	$250	$500
1	260	300
2	290	250
3	350	200
4	480	150
5	700	100

112. Refer to the above information, how many units would the profit-maximizing monopolist produce?
A) 1
B) 2
C) 3
D) 4

Ans: C Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Calculation

113. Refer to the above information, the monopolist should set its price at:
A) $150.
B) $250.
C) $200.
D) $200.

Ans: D Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Calculation

114. Refer to the above information, at its profit-maximizing output, the monopolist:
A) incurs a loss.
B) earns an economic profit of $250.
C) earns a normal profit of $250.
D) earns an economic profit of $150.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Calculation

115. If the variable costs of a profit-maximizing monopolist decline, the firm should:
A) produce more output and charge a higher price.
B) produce more output and charge a lower price.
C) reduce both output and price.
D) raise both output and price.

Ans: B Level: Difficult Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Application

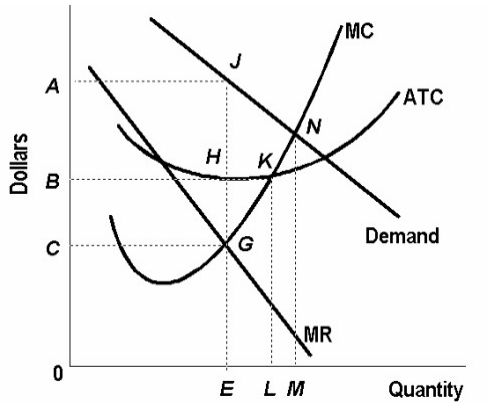
116. To maximize profit a monopolist must:
A) maximize its total revenue.
B) maximize the difference between marginal revenue and marginal cost.
C) maximize the difference between total revenue and total cost.
D) produce where average total cost is at a minimum.

Ans: C Level: Easy Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Application

117. When a monopolist is producing its profit -maximizing output, price will:
A) be less than MR.
B) equal neither MC nor MR.
C) equal MR.
D) equal MC.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Application

Use the following to answer questions 118-121:



118. Refer to the diagram above. To maximize profits or minimize losses this firm should produce:
A) E units and charge price C.
B) E units and charge price A.
C) M units and charge price N.
D) L units and charge price LK.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Graphic

119. Refer to the diagram above. In equilibrium total revenue will be:
A) NM times 0M.
B) 0EHB.
C) 0EGC.
D) 0AJE.

Ans: D Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Graphic

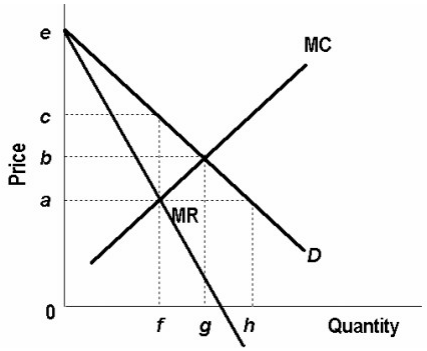
120. Refer to the diagram above. In equilibrium total cost will be:
A) NM times 0M.
B) 0AJE.
C) 0CGC.
D) 0BHE.

Ans: D Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Graphic

121. Refer to the diagram above. In equilibrium the firm will realize:
A) an economic profit of ABHJ.
B) an economic profit of ACGJ.
C) a loss of GH per unit.
D) a loss of JH per unit.

Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Graphic

Use the following to answer questions 122-124:



122. Refer to the diagram above for a monopolist. Monopoly price will be:
A) e.
B) c.
C) b.
D) a.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Graphic

123. Refer to the diagram above for a monopolist. Monopoly output will be:
A) between f and g.
B) h.
C) g.
D) f.

Ans: D Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Graphic

124. Refer to the diagram above for a monopolist. Monopoly profit:
A) cannot be determined from the information given.
B) will be ae per unit.
C) will be bc per unit.
D) will be ac per unit.

Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Subtopic: MR=MC Rule Type: Graphic

125. A monopolist:
   A) will realize an economic profit if price exceeds ATC at the equilibrium output.
   B) will realize an economic profit if ATC exceeds MR at the equilibrium output.
   C) will realize an economic loss if MC intersects the downward sloping portion of MR.
   D) always realizes an economic profit.

   Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
   Page: 199-201 Subtopic: MR=MC Rule Type: Application

126. The supply curve for a monopolist is:
   A) perfectly elastic.
   B) upward sloping.
   C) that portion of the marginal cost curve lying above minimum average variable cost.
   D) nonexistent.

   Ans: D Level: Easy Main Topic: 8.2 Output and price determination Page: 201
   Subtopic: No monopoly supply curve Type: Application

127. The supply curve for a monopoly is:
   A) the portion of the marginal cost curve that lies above the average variable cost curve.
   B) the portion of the marginal cost curve that lies above the average total cost curve.
   C) the portion of the marginal cost curve that lies above the average fixed cost curve.
   D) nonexistent.

   Ans: D Level: Easy Main Topic: 8.2 No monopoly supply curve Page: 201
   Type: Application

128. The supply curve of a monopolist:
   A) is that portion of its marginal cost curve which lies above average variable cost.
   B) is the same as that of a perfect competitive industry.
   C) is its average variable cost curve.
   D) does not exist because prices are not "given" to a monopolist.

   Ans: D Level: Moderate Main Topic: 8.2 Output and price determination
   Page: 201 Subtopic: No monopoly supply curve Type: Application

129. A profit maximizing monopolist seeks to:
A) maximize the unit profit.
B) maximize the total profit.
C) maximize the price of the product she/he sells.
D) maximize the quantity of the output she/he sells.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Subtopic: Misconception about monopoly pricing Type: Application

130. A profit maximizing monopolist prefers to:
A) sell higher quantity of output at a lower price.
B) sell a fixed quantity of output at higher price.
C) maximize the price of the product she/he sells.
D) sell as many units of output as the consumers wish to buy.

Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Subtopic: Misconception about monopoly pricing Type: Application

131. If a monopolist is producing at that output where P = ATC, then:
A) its economic profits will be zero.
B) it will be realizing losses.
C) it will be producing less than the profit-maximizing level of output.
D) it will be realizing an economic profit.

Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Subtopic: Possibility of losses by monopolist Type: Application

132. A monopolist's short-run profit-maximizing or loss-minimizing position is such that price:
A) equals marginal revenue.
B) may be greater or less than ATC.
C) will always equal ATC.
D) always exceeds ATC.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Subtopic: Possibility of losses by monopolist Type: Application

133. In the short run a monopolist's profit:
A) will be maximized where price equals average total cost.
B) may be positive, zero, or negative.
C) are always positive.
D) will be zero.

Ans: B Level: Easy Main Topic: 8.2 Output and price determination Page: 202
Subtopic: Possibility of losses by monopolist Type: Application

134. In the short run, a monopolist's economic profits:
A) are always positive because the monopolist is a price-maker.
B) are usually negative because of government price regulation.
C) are always zero because consumers prefer to buy from competitive sellers.
D) may be positive or negative depending on market demand and cost.

Ans: D Level: Easy Main Topic: 8.2 Output and price determination Page: 202
Subtopic: Possibility of losses by monopolist Type: Application

135. In the short run, a monopolist's profits:
A) may be positive, negative, or zero.
B) are positive because of the monopolist's market power.
C) are positive if the monopolist's elasticity of demand is less than 1.
D) are positive if the monopolist's selling price is above average variable cost.

Ans: A Level: Easy Main Topic: 8.2 Output and price determination Page: 202
Subtopic: Possibility of losses by monopolist Type: Application

136. In the short run a monopolist:
A) always earns an economic profit.
B) always earns a normal profit.
C) always realizes a loss.
D) may realize an economic profit, a normal profit, or a loss.

Ans: D Level: Easy Main Topic: 8.2 Output and price determination Page: 202
Subtopic: Possibility of losses by monopolist Type: Application

137. Economic profit in the long run is:
A) possible for both a monopoly and a competitor.
B) possible for a monopoly, but not for a competitor.
C) impossible for both a monopolist and a competitor.
D) only possible when barriers to entry are nonexistent.

Ans: B Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Subtopic: Possibility of losses by monopolist Type: Application

138. Monopolists may earn economic profits in the long run because:
A) of advertising.
B) marginal revenue is constant as sales increase.
C) of barriers to entry.
D) of rising average fixed costs.

Ans: C Level: Easy Main Topic: 8.2 Output and price determination Page: 202
Subtopic: Possibility of losses by monopolist Type: Application

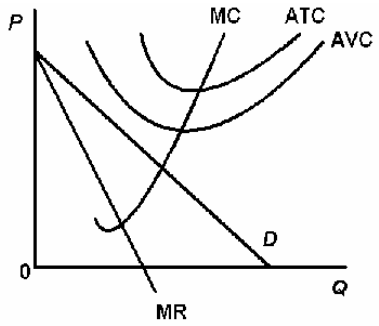
139. Which of the following statements is incorrect?
A) A monopolist's 100 percent market share ensures economic profits.
B) The monopolist's marginal revenue is less than price for any given output greater than 1.
C) A monopolistic firm produces a product having no close substitutes.
D) A monopolist's demand curve is the industry demand curve.

Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Subtopic: Possibility of losses by monopolist Type: Application

140. A profit-maximizing firm should shut down in the short run if the average revenue it receives is less than:
A) average variable cost.
B) average total cost.
C) average fixed cost.
D) marginal cost.

Ans: A Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Subtopic: Possibility of losses by monopolist Type: Application

141. A profit-maximizing monopolist facing the situation shown in the graph below should:



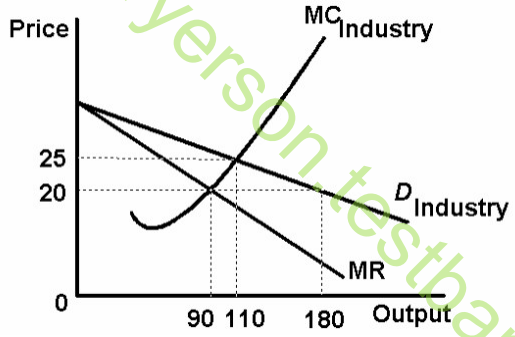
A) shut down immediately.
B) continue producing to minimize losses.
C) continue producing to make economic profits.
D) continue producing as long as price is greater than marginal cost.

Ans: A Level: Easy Main Topic: 8.2 Output and price determination Page: 202
Subtopic: Possibility of losses by monopolist Type: Graphic

142. Assuming no economies of scale and identical costs, if the firms in a perfect competitive industry were replaced by a profit-maximizing monopolist, the likely result would be a(n):
A) increase in both price and output.
B) unchanged price and reduced output.
C) increase in price and unchanged output.
D) increase in price and reduced output.

Ans: D Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203 Subtopic: Price, output, and efficiency Type: Application

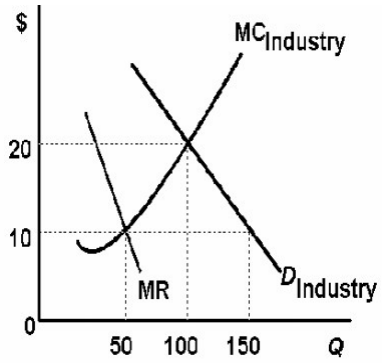
143. Based on the graph below, what is the difference between the perfect competitive equilibrium level of output and the monopolist equilibrium level of output?



A) 0
B) 20
C) 70
D) 90

Ans: B Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203 Subtopic: Price, output, and efficiency Type: Graphic

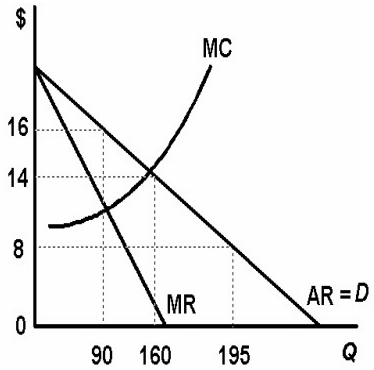
144. Based on the diagram below, what is the difference between the perfect competitive level of output and the monopolist level of output?



A) 0
B) 20
C) 50
D) 100

Ans: C Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203 Subtopic: Price, output, and efficiency Type: Graphic

145. Using the graph below, what is the difference between perfect competitive and monopolist output at the industry level?



A) 0
B) 35
C) 105
D) 70

Ans: D Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203 Subtopic: Price, output, and efficiency Type: Graphic

146. Confronted with the same unit cost data, a monopolistic producer will charge:
A) the same price and produce the same output as a competitive firm.
B) a higher price and produce a larger output than a competitive firm.
C) a higher price and produce a smaller output than a competitive firm.
D) a lower price and produce a smaller output than a competitive firm.

Ans: C Level: Difficult Main Topic: 8.3 Economic effects of monopoly
Page: 203 Subtopic: Price, output, and efficiency Type: Application

147. If a monopolist produces 100 units of output at a market price of $5 per unit with marginal revenue per unit equal to $4, we would expect that if the monopolist's product was provided under perfect competition, quantity would be:
A) higher than 100 units, price lower than $5, and MR = price.
B) lower than 100 units, price greater than $5, and MR = price.
C) higher than 100 units, price greater than $5, and MR = price.
D) lower than 100 units, price lower than $5, and MR = price.

Ans: A Level: Difficult Main Topic: 8.3 Economic effects of monopoly
Page: 203 Subtopic: Price, output, and efficiency Type: Application

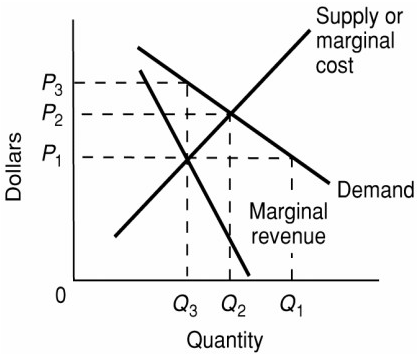
148. Compared to the perfect competitive firm, a monopoly:
A) is able to use barriers to entry and maintain positive economic profits in the long run.
B) produces an equal amount of output, but charges higher prices to cover all costs in the market.
C) is efficient from society's perspective because it has big plants and it uses the newest possible production technology.
D) will always become competitive in the long run because positive economic profits will induce competitors into the market.

Ans: A Level: Easy Main Topic: 8.3 Economic effects of monopoly Page: 203
Subtopic: Price, output, and efficiency Type: Application

149. If a monopolized industry should become perfect competitive without any change in cost conditions:
A) both price and quantity produced will increase.
B) both price and quantity produced will decrease.
C) price will increase and quantity produced will decrease.
D) price will decrease and quantity produced will increase.

Ans: D Level: Easy Main Topic: 8.3 Economic effects of monopoly Page: 203
Subtopic: Price, output, and efficiency Type: Application

Use the following to answer questions 150-151:



150. Refer to the diagram above. If this industry is perfectly competitive, the profit-maximizing price and quantity will be:
A) P_2 and Q_2.
B) P_1 and Q_1.
C) P_3 and Q_3.
D) indeterminate on the basis of the information given.

Ans: A Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Graphic

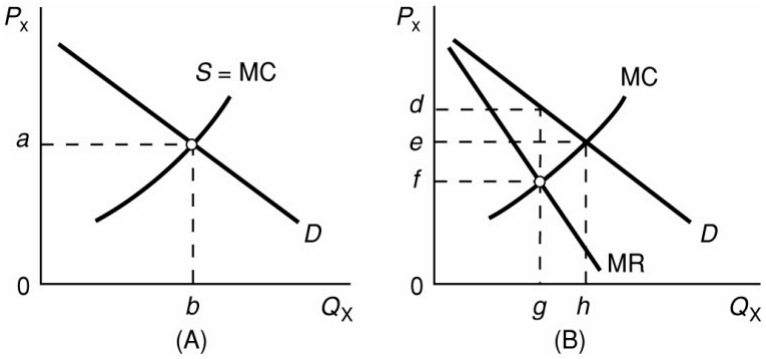
151. Refer to the diagram above. If this diagram illustrates a monopolistic firm, the profit-maximizing price and quantity will be:
A) P_1 and Q_1.
B) P_3 and Q_3.
C) P_2 and Q_2.
D) indeterminate on the basis of the information given.

Ans: B Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Graphic

152. Comparing a monopoly and a perfect competitive firm with identical costs, we would find in long-run equilibrium that the monopolist's:
A) price, output, and average total cost would all be higher.
B) price and average total cost would be higher, but output would be lower.
C) price, output, and average total cost would all be lower.
D) price and output would be lower, but average total cost would be higher.

Ans: B Level: Difficult Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

Use the following to answer questions 153-158:



153. Refer to the diagrams above. Diagram (A) represents:
A) equilibrium price and quantity in a perfect competitive industry.
B) the monopoly model.
C) an industry in which there is productive efficiency but not allocative efficiency.
D) a single firm operating in a perfect competitive industry.

Ans: A Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Graphic

154. Refer to the diagrams above. Diagram (B) represents:
A) the perfect competition model.
B) an industry in which there is allocative efficiency but not productive efficiency.
C) the monopoly model.
D) a long-run constant-cost industry.

Ans: C Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Graphic

155. Refer to the diagrams above. In diagram (B) the profit-maximizing quantity is:
A) g and the profit-maximizing price is e.
B) h and the profit-maximizing price is e.
C) g and the profit-maximizing price is f.
D) g and the profit-maximizing price is d.

Ans: D Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Graphic

156. Refer to the diagrams above. With the industry structure represented by diagram:
A) (A) there will be only a normal profit in the long run, while in (B) an economic profit can persist.
B) (A) price exceeds marginal cost, resulting in allocative inefficiency.
C) (B) price equals marginal cost, resulting in allocative efficiency.
D) (B) equilibrium price and quantity will be e and h, respectively.

Ans: A Level: Difficult Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Graphic

157. Refer to the diagrams above. With the industry structure represented by diagram:
A) (A) there will be allocative inefficiency.
B) (A) economic profit can persist in the long run.
C) (B) output will be less than in diagram (A).
D) (B) output will be the same as in diagram (A).

Ans: C Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Graphic

158. Refer to the diagrams above. The price will be _____and the quantity will be _____with the industry structure represented by diagram (B) compared to the one represented in (A).
A) higher; higher.
B) higher, lower.
C) lower, lower.
D) lower, higher.

Ans: B Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Graphic

159. Which of the following statements is correct?
A) The monopolist will maximize profit by producing at that point on the demand curve where elasticity is unity.
B) In seeking the profit-maximizing output the monopolist underallocates resources to its production.
C) The monopolist maximizes profits by producing that output at which the differential between price and average cost is the greatest.
D) the monopolistic sellers earn only normal profits in the long run.

Ans: B Level: Difficult Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

160. An important economic problem associated with monopoly is that, at the profit maximizing outputs, resources are:
A) overallocated because price exceeds marginal cost.
B) overallocated because marginal cost exceeds price.
C) underallocated because price exceeds marginal cost.
D) underallocated because marginal cost exceeds price.

Ans: C Level: Difficult Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

161. A single-price monopoly is economically undesirable because, at the profit maximizing output:
A) marginal revenue exceeds product price at all profitable levels of production.
B) monopolists always price their products on the basis of the ability of consumers to pay rather than on costs of production.
C) MC > P.
D) society values additional units of the monopolized product more highly than it does the alternative products those resources could otherwise produce.

Ans: D Level: Difficult Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

162. At its profit-maximizing output, a monopolist achieves:
A) neither "productive efficiency" nor "allocative efficiency."
B) both "productive efficiency" and "allocative efficiency."
C) "productive efficiency" but not "allocative efficiency."
D) "allocative efficiency" but not "productive efficiency."

Ans: A Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

163. Monopolists are said to be allocatively inefficient because:
A) they produce where MR > MC.
B) at the profit-maximizing output price is greater than AVC.
C) they produce only the type of product they desire and do not consider the consumer.
D) at the profit-maximizing output the marginal benefit to society of additional output is greater than the marginal cost to society.

Ans: D Level: Difficult Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

164. Allocative inefficiency due to unregulated monopoly is characterized by the condition:
    A) P = MC.
    B) P = MR.
    C) P > MC.
    D) P > AVC.

    Ans: C Level: Difficult Main Topic: 8.3 Economic effects of monopoly
    Page: 203-204 Subtopic: Price, output, and efficiency Type: Formula

165. The profit-maximizing output of a monopoly is economically inefficient because in equilibrium:
    A) price equals minimum average total cost.
    B) marginal revenue equals marginal cost.
    C) marginal cost exceeds price.
    D) price exceeds marginal cost.

    Ans: D Level: Difficult Main Topic: 8.3 Economic effects of monopoly
    Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

166. A single-price monopoly is economically inefficient:
    A) only because it produces beyond the point of minimum average total cost.
    B) only because it produces short of the point of minimum average total cost.
    C) because it produces short of minimum average cost and price is greater than marginal cost.
    D) because it produces beyond minimum average total cost and marginal cost is greater than price.

    Ans: C Level: Difficult Main Topic: 8.3 Economic effects of monopoly
    Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

167. Which is a major criticism of a monopoly as a source of allocative inefficiency?
    A) a monopolist fails to expand output to the level where the consumers' valuation of an additional unit is just equal to its opportunity cost.
    B) a monopolist has no incentive to produce efficiently, because even the inefficient monopolist can be assured of economic profits.
    C) a monopolist will always make profits and that means that prices are too high.
    D) a monopolist has an unfair advantage because it can purchase labour at a lower price than competitive firms in other industries.

    Ans: A Level: Difficult Main Topic: 8.3 Economic effects of monopoly
    Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

168. A monopolist is generally viewed as:
A) productively efficient, but allocatively inefficient.
B) productively inefficient, but allocatively efficient.
C) both productively and allocatively inefficient.
D) both productively and allocatively efficient.

Ans: C Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 203-204 Subtopic: Price, output, and efficiency Type: Application

169. It has been argued that in general, the existence of monopoly increases the income inequality in a society. This is because:
A) monopoly profit is distributed equally among all the consumers.
B) Monopoly increases the efficiency of the market.
C) Higher income groups own a larger proportion of the corporate stocks.
D) A monopolist charges a lower price for its product as compared with perfect competition.

Ans: C Level: Easy Main Topic: 8.3 Economic effects of monopoly Page: 204
Subtopic: Income transfer Type: Application

170. If a monopolist is producing more output than the MR = MC output:
A) the firm may, or may not, be maximizing profits.
B) it will be in the interest of the firm, but not necessarily of society, to reduce output.
C) it will be in the interest of the firm and society to increase output.
D) it will be in the interest of the firm and society to reduce output.

Ans: B Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 204 Subtopic: Income transfer Type: Application

171. A natural monopoly occurs when:
A) long-run average costs decline continuously through the range of demand.
B) a firm owns or controls some resource essential to production.
C) long-run average costs rise continuously as output is increased.
D) economies of scale are obtained at relatively low levels of output.

Ans: A Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 204-205 Subtopic: Cost complications Type: Application

172. A firm is likely to be a natural monopoly:
A) when the demand for its product or service is inelastic.
B) if it is producing an inferior good.
C) if economies of scale are experienced over the full range of output.
D) because government grants it an exclusive franchise.

Ans: C Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 204-205 Subtopic: Cost complications Type: Definition

173. Which of the following is characteristic of a regulated "natural monopoly"?
A) extensive economies of scale
B) the wasteful duplication of capital facilities in the event of competition
C) the provision of an essential service
D) all of the above

Ans: D Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 204-205 Subtopic: Cost complications Type: Application

174. A market in which the entire demand for a good or service can be satisfied at the least cost by a single firm is a:
A) horizontal market.
B) natural monopoly.
C) contestable market.
D) perfect market.

Ans: B Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 204-205 Subtopic: Cost complications Type: Definition

175. Large minimum efficient scale of plant combined with limited market demand may lead to:
A) natural monopoly.
B) patent monopoly
C) government franchise monopoly.
D) shared monopoly.

Ans: A Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 204-205 Subtopic: Cost complications Type: Application

176. The ability of a product to satisfy a large number of consumers simultaneously is called:
A) Economies of scale
B) X-inefficiency
C) Price discrimination
D) Simultaneous consumption

Ans: D Level: Easy Main Topic: 8.3 Economic effects of monopoly Page: 205
Subtopic: Cost complications Type: Definition

177. Some firms in the technology sector have achieved economies of scale because costs have been reduced by:
A) simultaneous consumption.
B) socially optimal pricing..
C) fair return pricing.
D) price discrimination

Ans: A Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 205 Subtopic: Cost complications Type: Application

178. What is the term that refers to increases in the value of a product to each user, including existing users, as the total number of users increases?
A) income transfer
B) price discrimination
C) simultaneous consumption
D) network effects

Ans: D Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 205 Subtopic: Cost complications Type: Definition

179. Some firms in the technology sector have achieved economies of scale because costs have been reduced by:
A) price discrimination.
B) rent-seeking.
C) network effects.
D) fair-return pricing.

Ans: C Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 205 Subtopic: Cost complications Type: Application

180. The term "X-inefficiency" refers to a situation in which a firm:
A) is not as technologically progressive as it might be.
B) encounters diseconomies of scale.
C) fails to realize all existing economies of scale.
D) fails to achieve the minimum average total costs attainable at each level of output.

Ans: D Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 205 Subtopic: Cost complications Type: Definition

181. There is some evidence to suggest that X-inefficiency is:
A) absent whenever two or more producers are competing with one another.
B) not encountered in either competitive or monopolistic firms.
C) more likely to occur in monopolistic firms than in competitive firms.
D) more likely to occur in competitive firms than in monopolistic firms.

Ans: C Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 205 Subtopic: Cost complications Type: Application

182. X-inefficiency is said to occur when a firm's:
A) average costs of producing any output are greater than the minimum possible average costs.
B) marginal costs of producing any output are greater than the minimum possible total costs.
C) total costs of producing any output are greater than the minimum possible average costs.
D) short-run costs of producing any output are greater than the long-run costs.

Ans: A Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 205 Subtopic: Cost complications Type: Definition

183. In general, the amount of X-inefficiency in an industry:
A) increases as the amount of competition increases.
B) increases as the amount of competition decreases.
C) decreases as the amount of competition decreases.
D) has no relationship to the amount of competition in an industry

Ans: B Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 205 Subtopic: Cost complications Type: Application

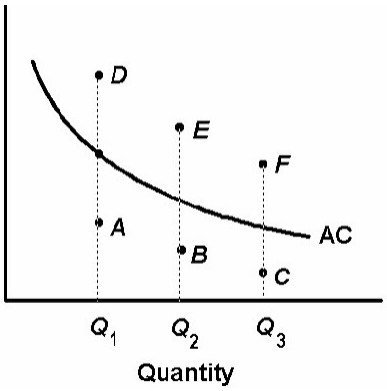
184. Which statement is correct?
A) monopolist firms tend to be more internally efficient than competitive firms because they have a single goal of profit maximization.
B) monopolist firms are sheltered from competitive forces and such an environment makes them subject to X-inefficiency.
C) monopolist firms are in industries with low barriers to entry that tend to lower the cost of producing products.
D) competitive firms tend to be more efficient than monopolist firms because they maximize per unit profits, not total profits.

Ans: B Level: Difficult Main Topic: 8.3 Economic effects of monopoly
Page: 205 Subtopic: Cost complications Type: Application

185. In which one of the following market models is X-inefficiency most likely to be the greatest?
A) perfect competition
B) oligopoly
C) monopolistic competition
D) monopoly

Ans: D Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 205-206 Subtopic: Cost complications Type: Application

Use the following to answer questions 186-189:



186. If the ATC curve in the graph above represents the minimum of the average total cost curve, then examples of X-inefficiency would best be represented by point:
A) A at output level Q_1 and point D at output level Q_1.
B) A at output level Q_1 and point B at output level Q_2.
C) E at output level Q_2 and point F at output level Q_3.
D) D at output level Q_1 and point C at output level Q_3.

Ans: C Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 205-206 Subtopic: Cost complications Type: Graphic

187. Refer to the long-run cost diagram for a firm above. If the firm produces output Q_1 at an average total cost of ATC_1, then the firm is:
   A) producing the potentially profit-maximizing output, but is failing to minimize production costs.
   B) incurring X-inefficiency, but is realizing all existing economies of scale.
   C) incurring X-inefficiency and is failing to realize all existing economies of scale.
   D) producing that output with the most efficient combination of inputs and is realizing all economies of scale.

   Ans: C Level: Difficult Main Topic: 8.3 Economic effects of monopoly
   Page: 205-206 Subtopic: Cost complications Type: Graphic

188. Refer to the long-run cost diagram for a firm above. If the firm produces output Q_2 at an average cost of ATC_2, then the firm is:
   A) producing the potentially profit-maximizing output, but is failing to minimize production costs.
   B) incurring X-inefficiency, but is producing that output at which all existing economies of scale might be realized.
   C) incurring X-inefficiency and is failing to produce the output at which all economies of scale might be realized.
   D) producing that output with the most efficient combination of inputs and is realizing all existing economies of scale.

   Ans: B Level: Difficult Main Topic: 8.3 Economic effects of monopoly
   Page: 205-206 Subtopic: Cost complications Type: Graphic

189. Refer to the long-run cost diagram for a firm above. If the firm produces output Q_2 at an average cost of ATC_3, then the firm is:
   A) producing the potentially profit-maximizing output, but is failing to minimize production costs.
   B) incurring X-inefficiency, but is realizing all existing economies of scale.
   C) incurring X-inefficiency and is failing to realize all existing economies of scale.
   D) producing that output with the most efficient combination of inputs and is realizing all existing economies of scale.

   Ans: D Level: Difficult Main Topic: 8.3 Economic effects of monopoly
   Page: 205-206 Subtopic: Cost complications Type: Graphic

190. In which one of the following market models is X-inefficiency least likely to be present?
A) perfect competition
B) oligopoly
C) monopolistic competition
D) monopoly

Ans: A Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 205-206 Subtopic: Cost complications Type: Application

191. Any activity designed to transfer income or wealth to a particular individual or firm at society's expense is called:
A) patent protection.
B) X-inefficiency.
C) price discrimination.
D) rent-seeking.

Ans: D Level: Easy Main Topic: 8.3 Economic effects of monopoly Page: 206
Subtopic: Cost complications Type: Definition

192. Efforts by corporate lobbyists to obtain a license that would give a firm a monopoly over the production of a product would be an example of:
A) rent-seeking.
B) price discrimination.
C) X-efficiency.
D) dynamic efficiency.

Ans: A Level: Easy Main Topic: 8.3 Economic effects of monopoly Page: 206
Subtopic: Cost complications Type: Application

193. Assume the owners of the only gambling casino in Halifax spend large sums of money lobbying provincial government officials to protect their gambling monopoly. Economists refer to these expenditures as:
A) rent seeking.
B) socially optimal pricing.
C) perfect price discrimination.
D) diseconomies of scale in production.

Ans: A Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 206 Subtopic: Cost complications Type: Definition

194. In response to a cost-reducing technological breakthrough in the production of its product, a profit-maximizing monopolist will normally:
A) increase price and decrease production.
B) not change its level of output or price.
C) decrease the price it charges for its product.
D) increase its output and practice price discrimination.

Ans: C Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 207 Subtopic: Assessment and policy options Type: Application

195. The development of a new and distinct product:
A) increases the advantage of an existing patent.
B) does not affect the advantage of an existing patent.
C) patent reduces the level of competition among firms.
D) undermines the advantage of an existing

Ans: D Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 207 Subtopic: Assessment and policy options Type: Application

196. Price discrimination refers to:
A) selling a given product for different prices at two different points in time.
B) any price above that which is equal to a minimum average total cost.
C) the selling of a given product at different prices which do not reflect cost differences.
D) the difference between the prices a perfect competitive seller and a monopolistic seller would charge.

Ans: C Level: Moderate Main Topic: 8.4 Price discrimination Page: 208
Subtopic: Conditions Type: Definition

197. The practice of price discrimination is associated with monopoly because:
A) it can be practiced whenever a firm's demand curve is downward sloping.
B) monopolists have considerable ability to control output and price.
C) monopolists usually realize economies of scale.
D) most monopolists sell differentiated products.

Ans: B Level: Moderate Main Topic: 8.4 Price discrimination Page: 208
Subtopic: Conditions Type: Application

198. Which of the following is not a precondition for price discrimination?
A) The commodity involved must be a durable good.
B) The good or service cannot be resold by original buyers.
C) The seller must be able to segment the market, that is, to distinguish buyers with different elasticities of demand.
D) The seller must possess some degree of monopoly power.

Ans: A Level: Easy Main Topic: 8.4 Price discrimination Page: 208
Subtopic: Conditions Type: Application

199. The economic incentive for price discrimination depends on:
A) prejudices of business managers.
B) differences among buyers' demand elasticities.
C) a desire to evade antitrust legislation.
D) differences among sellers' costs.

Ans: B Level: Easy Main Topic: 8.4 Price discrimination Page: 208
Subtopic: Conditions Type: Application

200. To practice price discrimination, a firm must meet each of the conditions listed below, except:
A) the firm must have some degree of monopoly power.
B) the firm must be able to separate its customers into two or more groups with different demand elasticities for the product the firm produces.
C) purchasers of the firm's product cannot resell it.
D) the firm's production schedule must entail economies of scale.

Ans: D Level: Moderate Main Topic: 8.4 Price discrimination Page: 208
Subtopic: Conditions Type: Application

201. To practice price discrimination, a monopolist must:
A) be a natural monopoly.
B) charge one price to all buyers.
C) permit the resale of the product by the original buyers.
D) be able to separate buyers into different markets with different price elasticities.

Ans: D Level: Easy Main Topic: 8.4 Price discrimination Page: 208
Subtopic: Conditions Type: Application

202. Successful price discrimination requires that:
   A) buyers with inelastic demand be charged higher prices than buyers with elastic demand.
   B) buyers with inelastic demand be charged lower prices than buyers with elastic demand.
   C) all buyers be charged the same price regardless of their elasticity of demand.
   D) all buyers have the same price elasticity of demand.

   Ans: A Level: Moderate Main Topic: 8.4 Price discrimination Page: 208
   Subtopic: Conditions Type: Application

203. Price discrimination is more common in service industries because:
   A) low price buyers will find it virtually impossible to resell the products of such industries to high price buyers.
   B) the costs of providing such industries' products to different groups of buyers varies dramatically.
   C) the price elasticity of demand is the same for all groups of buyers in these industries.
   D) all firms in these industries have significant monopoly power over price.

   Ans: A Level: Moderate Main Topic: 8.4 Price discrimination Page: 208
   Subtopic: Conditions Type: Application

204. Which case below best represents a case of price discrimination?
   A) a major airline sells tickets to senior citizens at lower prices than to other passengers.
   B) an insurance company offers discounts to safe drivers.
   C) a utility company charges less for electricity used during "off-peak" hours, when it does not have to operate its less-efficient generating plants.
   D) a professional baseball team pays two players with identical batting averages different salaries.

   Ans: A Level: Moderate Main Topic: 8.4 Price discrimination Page: 208-209
   Subtopic: Examples of price discrimination Type: Application

205. Which would definitely not be an example of price discrimination?
   A) A theatre charges children less than adults for a movie.
   B) Universities charge higher tuition for out-of-province students.
   C) A doctor charges for services according to the income of patients.
   D) An electric power company charges less for electricity used during off-peak hours when production costs are lower.

   Ans: D Level: Easy Main Topic: 8.4 Price discrimination Page: 209
   Subtopic: Examples of price discrimination Type: Application

206. Which is the best example of price discrimination?
A) an airline company charging lower fares per pound for air freight than for passengers
B) a telephone company charging lower rates to weekend users than weekday users
C) a supermarket charging lower prices in its inner city store than its out-of-town store
D) a private doctor charging higher fees to patients receiving special services than patients receiving regular services

Ans: B Level: Moderate Main Topic: 8.4 Price discrimination Page: 209
Subtopic: Examples of price discrimination Type: Application

207. Which of the following would be evidence of price discrimination at a local bar called the Stabilizer?
A) charging higher prices than under perfect competition
B) charging higher prices for imported than for domestic beer
C) charging lower prices to customers wearing Stabilizer T-shirts
D) charging lower prices to people who bring their own glasses and pitchers

Ans: C Level: Moderate Main Topic: 8.4 Price discrimination Page: 209
Subtopic: Examples of price discrimination Type: Application

208. Which is not true of price discrimination?
A) It exists when price differences depend critically on different buyers' evaluations of a product.
B) Successful price discrimination will provide the firm with higher total revenue than if it does not discriminate.
C) Successful price discrimination implies that the producer can separate customers into easily identifiable groups.
D) Price discrimination will generally result in a lower level of output than would be the case under a single-price monopoly.

Ans: D Level: Moderate Main Topic: 8.4 Price discrimination Page: 209
Subtopic: Examples of price discrimination Type: Application

209. Which is true of price discrimination?
A) successful price discrimination will provide the firm with lower total profits than if it did not discriminate.
B) successful price discrimination will provide the firm with higher total revenue than if it did not discriminate.
C) price discrimination will generally result in a lower level of output than would be the case under a single-price monopoly.
D) it exists when price differences depend critically on differences in the costs of production of serving different groups of buyers.

Ans: B Level: Moderate Main Topic: 8.4 Price discrimination Page: 209
Subtopic: Examples of price discrimination Type: Application

210. If a monopolist engages in price discrimination, we can expect:
A) profits to increase and output to fall.
B) both profits and output to increase.
C) both profits and output to decrease.
D) the demand curve to lie below the marginal revenue curve.

Ans: B Level: Moderate Main Topic: 8.4 Price discrimination Page: 209-210
Subtopic: Graphic analysis Type: Application

Use the following to answer questions 211-212:

Quantity demanded	Price	Total cost
0	$600	$ 200
1	550	300
2	500	350
3	450	410
4	400	490
5	350	600
6	300	740
7	250	920
8	200	1150
9	150	1440
10	100	1800

211. Refer to the table above. The profit-maximizing output and price for a non-price discriminating monopolist would be:
A) 3 units and a $450 price.
B) 4 units and a $400 price.
C) 5 units and a $350 price.
D) 6 units and a $300 price.

Ans: C Level: Moderate Main Topic: 8.4 Price discrimination Page: 209-210
Subtopic: Graphic analysis Type: Calculation

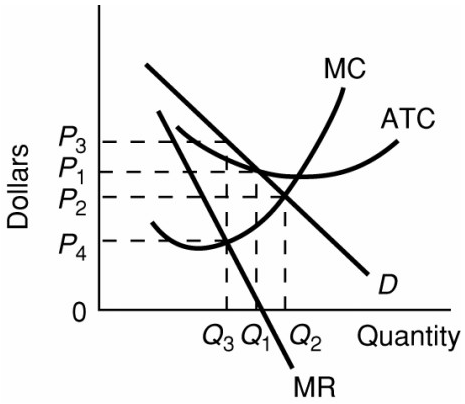
212. Refer to the table above. Assume this monopolist is able to engage in price discrimination and sell the product to two different groups of consumers and charge each group according to their elasticities of demand As a result, we expect that the profit level for this monopolist compare to non-price discriminating to be:
A) lower.
B) higher
C) does not change.
D) twice as much.

Ans: B Level: Difficult Main Topic: 8.4 Price discrimination Page: 209-210
Subtopic: Graphic analysis Type: Application

213. If the long-run average total cost curve of an industry is declining at the point where it intersects the industry demand curve, we can expect:
A) an overallocation of resources.
B) the industry will be perfectly competitive.
C) the industry will be monopolistically competitive.
D) the industry will be a natural monopoly.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Application

Use the following to answer questions 214-216:



214. Refer to the diagram for a monopolist above. If the monopolist is unregulated, it will maximize profits by charging:
A) a price above P_3 and selling a quantity less than Q_3.
B) price P_3 and producing output Q_3.
C) price P_2 and producing output Q_2.
D) price P_1 and producing output Q_1.

Ans: B Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Graphic

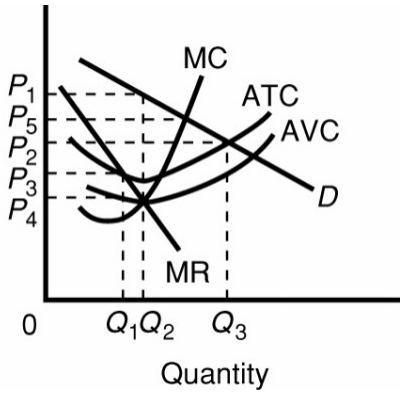
215. Refer to the diagram for a monopolist above. If the regulatory commission seeks to achieve the most efficient allocation of resources to this line of production, it will set a price of:
A) P_1.
B) P_3.
C) P_4.
D) P_2.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Graphic

216. Refer to the diagram above. Suppose the government forces the monopolist shown above to charge the price at a point on its demand curve which results in an optimal allocation of scarce resources. As a result, the monopolist will:
A) incur a loss.
B) earn zero economic profits.
C) earn more economic profits.
D) earn less economic profits.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Application

Use the following to answer questions 217-219:



217. Refer to the cost and demand data for an unregulated monopolist. In equilibrium the firm will produce:
A) Q_1 and charge price P_2.
B) Q_2 and charge price P_1.
C) Q_2 and charge price P_3.
D) Q_3 and charge price P_2.

Ans: B Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Graphic

218. Refer to the cost and demand data for an unregulated monopolist. In equilibrium the firm will realize a per unit:
A) profit of P_1P_3.
B) profit of P_1P_4.
C) loss of P_3P_4.
D) loss of P_1P_2.

Ans: A Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Graphic

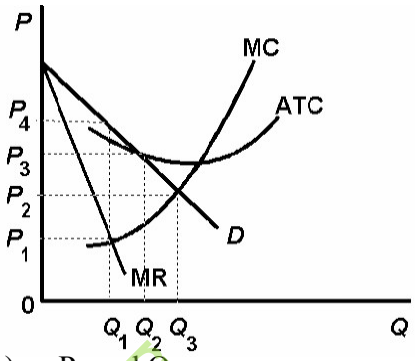
219. Refer to the cost and demand data for a monopolist. Suppose this firm is deemed a natural monopoly and is subjected to a regulatory commission. If the commission seeks to achieve the most efficient allocation of resources for this firm, it should set its price at:
A) P_1.
B) P_2.
C) P_4.
D) P_5.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Graphic

220. If a regulatory commission wants to establish an "optimal social" price for a natural monopoly, it should select that price:
A) at which the marginal cost curve intersects the demand curve.
B) at which marginal revenue is zero.
C) at which the average total cost curve intersects the demand curve.
D) which corresponds with the equality of marginal cost and marginal revenue.

Ans: A Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Application

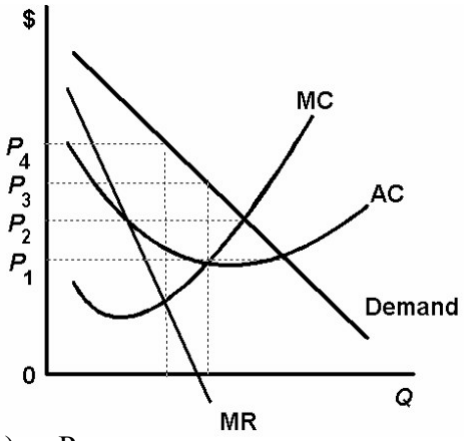
221. If the government regulated the monopoly shown in the graph below and forced it to produce the level of output where there is an optimal allocation of scarce resources, what price and quantity levels would we observe in the short run?



A) P_1 and Q_1
B) P_2 and Q_3
C) P_3 and Q_2
D) P_4 and Q_1 Main Topic: 8.5 Regulated monopoly Page: 211

Ans: B Level: Difficult
Subtopic: Socially optimal price: P=MC Type: Graphic

222. The following graph shows the short-run cost and revenue situation for a regulated monopoly. If this industry were to adopt a policy of marginal cost pricing it should set a price equal to:



A) P_1.
B) P_2.
C) P_3.
D) P_4. Moderate Main Topic: 8.5 Regulated monopoly Page: 211

Ans: B Level:
Subtopic: Socially optimal price: P=MC Type: Graphic

223. Monopolists are said to be allocatively inefficient because:
A) they produce where MR > MC.
B) at the profit-maximizing output price is greater than AVC.
C) they produce only the type of product they desire and do not consider the consumer.
D) at the profit-maximizing output the marginal benefit to society of additional output is greater than the marginal cost to society.

Ans: D Level: Difficult Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Application

Use the following to answer question 224:

The following question is based on the demand and cost data for a monopolist given in the table.

Output	Price	Total cost
0	$500	$250
1	300	260
2	250	290
3	200	350
4	150	500
5	100	680

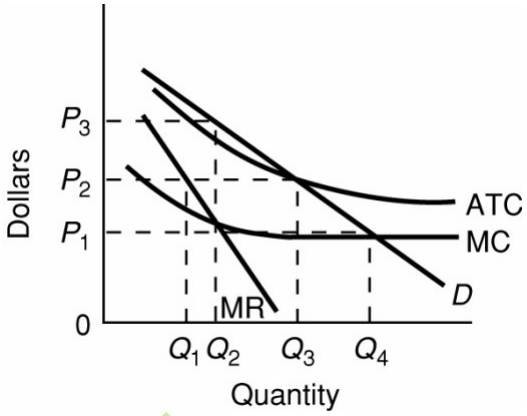
224. Refer to the information provided. If the monopolist were forced to produce the socially optimal output by the imposition of a ceiling price, the ceiling price would have to be:
A) $100.
B) $150.
C) $200.
D) $250. Main Topic: 8.5 Regulated monopoly Page: 211

Ans: B Level: Moderate
Subtopic: Socially optimal price: P=MC Type: Calculation

225. If a regulatory commission forces a natural monopoly to charge a price equal to its marginal cost:
A) the monopoly may incur a loss.
B) resource allocation will be improved.
C) output will increase.
D) all of the above will occur.

Ans: D Level: Easy Main Topic: 8.5 Regulated monopoly Page: 211
Subtopic: Socially optimal price: P=MC Type: Application

Use the following to answer questions 226-228:



226. Refer to the diagram for a natural monopolist above. If a regulatory commission set a maximum price of P_1, the monopolist would:
A) produce output Q_2 and realize a normal profit.
B) produce output Q_4 and realize a normal profit.
C) produce output Q_3 and realize an economic profit.
D) produce output Q_4 and realize a loss.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211-212
Subtopic: Fair-return price: P=ATC Type: Graphic

227. Refer to the above diagram for a natural monopolist. If a regulatory commission were to set a maximum price of P_3, the monopolist would:
A) maximize profits.
B) increase output beyond the profit-maximizing level.
C) reduce output below the profit-maximizing level.
D) be unable to make a normal profit.

Ans: A Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211-212
Subtopic: Fair-return price: P=ATC Type: Graphic

228. Refer to the above diagram for a natural monopolist. If a regulatory commission set a maximum price of P_2, the monopolist would:
A) produce output Q_1 and realize an economic profit.
B) produce output Q_3 and realize an economic profit.
C) close down in the short run.
D) produce output Q_3 and realize a normal profit.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211-212
Subtopic: Fair-return price: P=ATC Type: Graphic

229. Suppose for a regulated monopoly that price equals minimum ATC but price exceeds MC. This means that:
A) both productive and allocative efficiency are being achieved.
B) productive efficiency is being achieved, but not allocative efficiency.
C) allocative efficiency is being achieved, but not productive efficiency.
D) neither productive nor allocative efficiency is being achieved.

Ans: B Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211-212
Subtopic: Fair-return price: P=ATC Type: Application

230. With a natural monopoly, the fair return price:
A) is allocatively efficient; the socially optimal price is allocatively inefficient.
B) is allocatively inefficient; the socially optimal price is allocatively efficient.
C) and the socially optimal price are both allocatively inefficient.
D) and the socially optimal price are both allocatively efficient

Ans: B Level: Difficult Main Topic: 8.5 Regulated monopoly Page: 211-212
Subtopic: Fair-return price: P=ATC Type: Definition

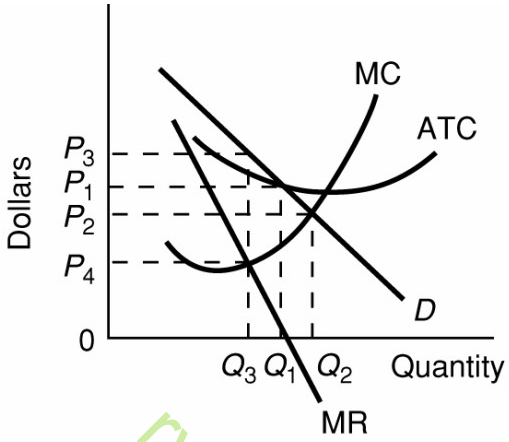
231. If a regulatory commission forces a natural monopoly to charge a price which is equal to its average total cost:
A) output will increase.
B) the monopolist will realize a normal profit.
C) resource allocation will be improved.
D) all of the above will occur.

Ans: D Level: Easy Main Topic: 8.5 Regulated monopoly Page: 211-212
Subtopic: Fair-return price: P=ATC Type: Application

232. If a regulatory commission wants to provide a natural monopoly with a "fair return," it should establish that price which is equal to:
A) minimum average fixed cost.
B) average total cost.
C) marginal cost.
D) marginal revenue.

Ans: B Level: Easy Main Topic: 8.5 Regulated monopoly Page: 211-212
Subtopic: Fair-return price: P=ATC Type: Application

Use the following to answer questions 233-234:



233. Refer to the above diagram for a monopolist. Suppose a regulatory commission is created to determine a legal price for the monopoly. If the commission seeks to provide the monopolist with a "fair return," it will set price at:
A) P_1.
B) P_3.
C) P_2.
D) P_4.

Ans: A Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211-212
Subtopic: Fair-return price: P=ATC Type: Graphic

234. Refer to the above diagram for a monopolist. If the commission sets price to achieve the most efficient allocation of resources, it will have to:
A) tax the monopolist P_3P_1 per unit to prevent the monopolist from realizing an economic profit.
B) subsidize the monopolist or the monopolist will go bankrupt in the long run.
C) subsidize the monopolist P_1P_4 per unit to allow the monopolist to break even.
D) tax the monopolist P_1P_2 per unit to prevent the monopolist from realizing an economic profit.

Ans: B Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 212
Subtopic: Dilemma of regulation Type: Application

235. One argument for requiring the government to regulate natural monopolies is that:
A) these monopolies usually produce things which are potentially harmful to our health.
B) without regulation these monopolies produce at a level where marginal benefit is greater than marginal cost.
C) without regulation these monopolies produce at a level where marginal benefit is less than marginal cost.
D) without regulation the industry would become competitive and there would be too many firms in the market to produce efficiently.

Ans: B Level: Difficult Main Topic: 8.5 Regulated monopoly Page: 212
Subtopic: Dilemma of regulation Type: Application

236. An argument for making regulated monopolies adopt marginal cost pricing is that this would:
A) increase productive efficiency by making price equal average cost.
B) benefit higher income groups by making monopoly products more affordable.
C) increase managerial incentives to reduce employment and production.
D) make the marginal cost equal to society's valuation of the marginal benefit.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 212
Subtopic: Dilemma of regulation Type: Application

237. If a regulatory commission imposes upon a non-discriminating natural monopoly a price which is equal to marginal cost and below average total cost at the resulting output, then:
A) the firm will realize an economic profit.
B) the firm will earn only a normal profit.
C) allocative efficiency will be worsened.
D) the firm must be subsidized or it will go bankrupt.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 212
Subtopic: Dilemma of regulation Type: Application

238. A major criticism of industrial regulation is that:
A) it has been applied to virtually all major Canadian corporations in the post-World War II period.
B) marginal cost pricing has created an underallocation of resources.
C) by allowing a "fair return" price, it gives natural monopolists little incentive to contain costs.
D) regulatory commissions have frequently caused natural monopolies to go bankrupt.

Ans: C Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 212
Subtopic: Dilemma of regulation Type: Application

239. Critics of the regulation of natural monopolies contend that:
A) regulation increases the incentive of firms to lower costs.
B) regulated firms may use "creative accounting" to reduce costs, prices, and profits.
C) when rates of return are based on the value of real capital, an uneconomic substitution of labour for capital may occur.
D) the industry may "capture" or control the regulatory commission.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 212
Subtopic: Dilemma of regulation Type: Application

240. The "dilemma of regulation" refers to the notion that:
A) the regulated price which achieves allocative efficiency is also likely to result in persistent economic profits.
B) the regulated price which results in a "fair return" restricts output by more than would unregulated monopoly.
C) regulated pricing always conflicts with the "due process" provision of the Canadian constitution.
D) the regulated price which achieves allocative efficiency is also likely to result in losses.

Ans: D Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 212
Subtopic: Dilemma of regulation Type: Definition

241. What is the meaning of the phrase "dilemma of regulation"?
A) natural monopolies achieve economies of scale, but charge high prices when there is no government regulation; government regulation reduces prices, but results in diseconomies of scale
B) natural monopolies are profitable, but only if the government permits price discrimination; government regulation to restrict price discrimination reduces monopoly prices, but the regulation also reduces monopoly output
C) the fair return price achieves allocative efficiency, but may produce economic losses; the socially optimal price yields a normal profit but may not be allocatively efficient
D) the socially optimal price achieves allocative efficiency, but may produce economic losses; the fair return price yields a normal profit but may not be allocatively efficient

Ans: D Level: Difficult Main Topic: 8.5 Regulated monopoly Page: 212
Subtopic: Dilemma of regulation Type: Definition

242. The inefficiency brought about by monopoly is referred to as:
A) price discrimination.
B) reduction in output through government regulation.
C) deadweight loss.
D) monopoly's gain.

Ans: C Level: Easy Main Topic: 8.6 Monopoly and deadweight loss
Page: 212-213 Type: Definition

243. If a monopolist set the quantity produced at MR=MC and charge a price according to the market demand curve, then:
A) a deadweight loss is created as a result of a lower consumer surplus.
B) a deadweight loss is created as a result of a higher consumer surplus.
C) a deadweight loss is created as a result of a loss to the monopolist.
D) a deadweight loss is created as a result of higher output produced and higher price charged by the monopolist.

Ans: A Level: Moderate Main Topic: 8.6 Monopoly and deadweight loss
Page: 212-213 Type: Application

244. De Beers Consolidated Mines:
A) produces about 70 percent of the world's diamonds in its own mines.
B) produces about 45 percent of the world's diamond output
C) produces about 30 percent of the world's diamond output
D) does not produce diamonds, but exerts almost total control of their marketing.

Ans: B Level: Easy Main Topic: Last Word Page: 214 Type: Application

245. De Beers attempts to bring independent diamond mines into its monopoly by:
A) convincing them that monopolized sales will maximize their profits.
B) increasing the world supply and reducing the price of the particular kind of diamonds the independent mines produce.
C) purchasing the output of independent mines to keep it off the world market.
D) doing all of the above.

Ans: D Level: Moderate Main Topic: Last Word Page: 214
Type: Application

246. What type of barrier to entry is used by De Beers to maintain its monopoly position?
A) patent protection
B) government regulation
C) economies of scale
D) ownership of an essential resource

Ans: D Level: Easy Main Topic: Last Word Page: 214 Type: Application

247. At the profit-maximizing level of output for the De Beers Consolidated Mines of South Africa:
A) the demand for diamonds is price inelastic.
B) average total cost equals marginal costs and equals product price.
C) price is greater than average total cost and the firm makes substantial profits.
D) price is less than average total cost and the firm experiences substantial losses.

Ans: C Level: Moderate Main Topic: Last Word Page: 214
Type: Application

248. The monopoly position of De Beers has been maintained in recent years primarily by:
A) cutting production and stockpiling.
B) obtaining government licenses and patents.
C) price discrimination and government regulation.
D) expanding economies of scale in diamond production.

Ans: A Level: Easy Main Topic: Last Word Page: 214 Type: Application

249. The DeBeers' diamond monopoly has weakened somewhat in recent years primarily due to:
A) emergence of high quality artificial diamonds that consumers find to be a perfect substitute for real diamonds.
B) successful antitrust prosecution against DeBeers by various governments around the world.
C) new discoveries of diamonds by firms currently not in partnership with DeBeers.
D) the effectiveness of its "diamonds are forever" advertising campaign.

Ans: C Level: Easy Main Topic: Last Word Page: 214 Type: Application

250. Because of the ability to influence price, the monopolist can increase price and increase volume of sales simultaneously.

Ans: False Level: Easy Main Topic: 8.1 Characteristics of monopoly
Page: 192-193 Type: Application

251. A perfect competitive firm is a price maker, but a monopolist is a price taker.

Ans: False Level: Easy Main Topic: 8.1 Characteristics of monopoly
Page: 192-193 Type: Application

252. If the XYZ Company can sell 4 units per week at $10 per unit and 5 units per week at $9 per unit, the marginal revenue of the fifth unit is $5.

Ans: True Level: Easy Main Topic: 8.1 Characteristics of monopoly
Page: 196-197 Type: Calculation

253. In a monopoly, price is greater than marginal cost.

Ans: True Level: Easy Main Topic: 8.1 Characteristics of monopoly Page: 197
Type: Application

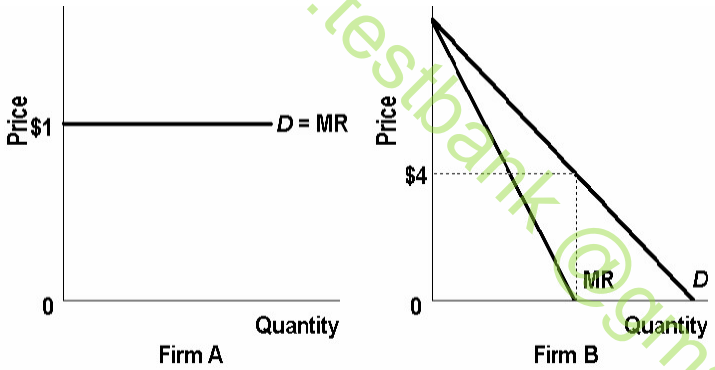
254. As a monopolist increases its output, it finds that its total revenue at first increases, and that after some output level is reached, its total revenue begins to decrease.

Ans: True Level: Moderate Main Topic: 8.1 Characteristics of monopoly
Page: 197-198 Type: Application

255. A monopolist will avoid setting a price in the elastic segment of the demand curve and prefer to set the price in the inelastic segment.

Ans: False Level: Moderate Main Topic: 8.1 Characteristics of monopoly
Page: 197-198 Type: Application

Use the following to answer questions 256-258:



256. Refer to the diagrams above. Firm B's average revenue curve coincides with its marginal revenue curve.

Ans: False Level: Moderate Main Topic: 8.1 Characteristics of monopoly
Page: 197-198 Type: Graphic

257. Refer to the diagrams above. The demand for Firm B's product is elastic at all prices in excess of $4.

Ans: True Level: Moderate Main Topic: 8.1 Characteristics of monopoly
Page: 197-198 Type: Graphic

258. Refer to the diagrams above. The demand for Firm B's product is inelastic at all prices below $4.

Ans: True Level: Moderate Main Topic: 8.1 Characteristics of monopoly
Page: 197-198 Type: Graphic

259. Equilibrium for the monopolist occurs where P > MR > MC > average total cost.

Ans: False Level: Difficult Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Application

260. In the long run the monopolist must produce at that output where average total cost is at a minimum.

Ans: False Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Application

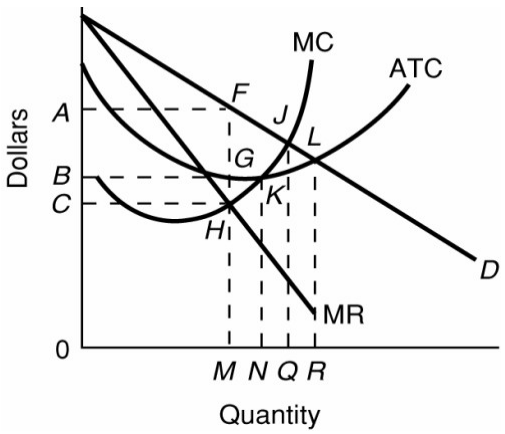
261. A monopolistic producer will maximize profits by producing at that output where price and marginal cost are equal.

Ans: False Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Application

262. In the short run the monopolist will maximize profits by producing at that level of output where the difference between price and average total cost is at a maximum.

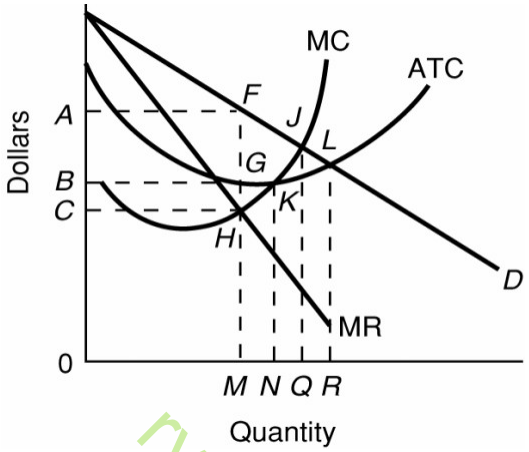
Ans: False Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Application

263. Refer to the diagram for a monopolist. The profit-maximizing output for this firm is M.



Ans: True Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Graphic

Use the following to answer questions 264-269:



264. Refer to the diagram for a monopolist. At the profit-maximizing output the firm's economic profit will be BAFG.

Ans: True Level: Difficult Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Graphic

265. Refer to the diagram for a monopolist. At output R economic profits will be zero.

Ans: True Level: Difficult Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Graphic

266. Refer to the diagram for a monopolist. At output Q production will be unprofitable.

Ans: False Level: Difficult Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Graphic

267. Refer to the diagram for a monopolist. The profit-maximizing price for this firm is J.

Ans: False Level: Moderate Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Graphic

268. Refer to the diagram for a monopolist. At output M total variable cost will be 0CHM.

Ans: False Level: Difficult Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Graphic

269. Refer to the diagram for a monopolist. At output Q average variable cost is QJ.

Ans: False Level: Difficult Main Topic: 8.2 Output and price determination
Page: 199-201 Type: Graphic

270. The supply curve for the monopolist is upward sloping.

Ans: False Level: Easy Main Topic: 8.2 Output and price determination
Page: 201 Type: Application

271. The supply curve for a monopolist is the upward sloping portion of the marginal cost curve that lies above the average variable cost curve.

Ans: False Level: Moderate Main Topic: 8.2 Output and price determination
Page: 201 Type: Application

272. In a monopoly, price is less than minimum average total cost.

Ans: False Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Type: Application

273. Monopolistic producers always earn economic profits.

Ans: False Level: Easy Main Topic: 8.2 Output and price determination
Page: 202 Type: Application

274. If a monopolist discovers that it is operating at a level of output where price < average variable costs, it will continue to operate in the short run.

Ans: False Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Type: Application

275. A monopolist will not charge the highest price it can get.

Ans: True Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202 Type: Application

276. A monopolist seeks maximum unit profits.

Ans: False Level: Moderate Main Topic: 8.2 Output and price determination
Page: 202

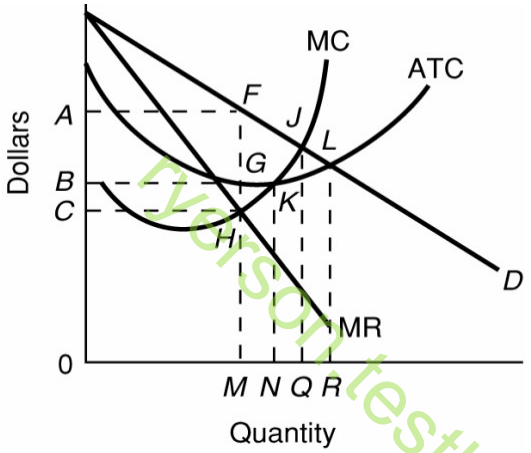
277. In the short run the monopolist will charge the highest price the market will bear for its product.

Ans: False Level: Easy Main Topic: 8.2 Output and price determination
Page: 202 Type: Application

278. Because of their large-scale level of production, monopolists overallocate resources to their industry by producing beyond the P = MC output.

Ans: False Level: Moderate Main Topic: 8.3 Economic effects of monopoly
Page: 203 Type: Application

279. Refer to the diagram for a monopolist. From society's point of view it would be desirable to have the monopolist produce a larger output than M.



Ans: True Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 203 Type: Graphic

280. One of the economic effects of monopoly is an income inequality.

Ans: True Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 204 Type: Application

281. Rent-seeking behaviour refers to activities designed to transfer income or wealth to a particular firm or resource supplier at someone else's or society's expense.

Ans: True Level: Easy Main Topic: 8.3 Economic effects of monopoly
Page: 206 Type: Definition

282. Price discrimination is not viable if consumers can resell the products they purchase.

Ans: True Level: Moderate Main Topic: 8.4 Price discrimination Page: 208
Type: Application

283. Compared to a competitive firm, a price-discriminating monopolist will set a higher (average) price and produce at a lower (average) level of output.

Ans: False Level: Difficult Main Topic: 8.3 Economic effects of monopoly Page: 208-209 Type: Application

284. Without regulations, monopolists will produce at an output level where marginal benefit is greater than marginal cost.

Ans: True Level: Moderate Main Topic: 8.5 Regulated monopoly Page: 211 Type: Application

285. The net loss of consumer surplus and producer surplus is referred to as deadweight loss.

Ans: True Level: Easy Main Topic: 8.6 Monopoly and deadweight loss Page: 212-213 Type: Definition

286. De Beer's past monopoly behaviour and the result of it are a classic example of a regulated monopoly model.

Ans: False Level: Easy Main Topic: The last word Page: 214 Type: Application

CHAPTER 9

Monopolistic Competition and Oligopoly

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	Appendix to Chapter 9: Additional game theory applications	

1. Monopolistic competition means:
   A) a market situation where competition is based entirely on product differentiation and advertising.
   B) a large number of firms producing a standardized or homogeneous product.
   C) many firms producing differentiated products.
   D) a few firms producing a standardized or homogeneous product.

   Ans: C Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition Page: 219 Subtopic: Relatively large number of sellers Type: Definition

2. Monopolistic competition is characterized by a:
   A) few dominant firms and low entry barriers.
   B) large number of firms and low entry barriers.
   C) large number of firms and substantial entry barriers.
   D) few dominant firms and substantial entry barriers.

   Ans: B Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition Page: 219-220 Subtopic: Relatively large number of sellers Type: Application

3. If the number of firms in a monopolistically competitive industry increases and the degree of product differentiation diminishes:
   A) the likelihood of realizing economic profits in the long run would be enhanced.
   B) individual firms would now be operating at outputs where their average total costs would be higher.
   C) the likelihood of collusive pricing would increase
   D) the industry would more closely approximate perfect competition.

   Ans: D Level: Moderate Main Topic: 9.1 Characteristics of monopolistic competition Page: 219-220 Subtopic: Relatively large number of sellers Type: Application

4. A monopolistically competitive industry combines elements of both competition and monopoly. It is correct to say that the competitive element results from:
   A) a relatively large number of firms and the monopolistic element from product differentiation.
   B) product differentiation and the monopolistic element from high entry barriers.
   C) a perfectly elastic demand curve and the monopolistic element from low entry barriers.
   D) a highly inelastic demand curve and the monopolistic element from advertising and product promotion.

   Ans: A Level: Moderate Main Topic: 9.1 Characteristics of monopolistic competition Page: 220 Subtopic: Relatively large number of sellers Type: Application

5. Economic analysis of a monopolistically competitive industry is more complicated than that of perfect competition because:
   A) the number of firms in the industry is larger.
   B) monopolistically competitive firms cannot realize an economic profit in the long run.
   C) of product differentiation and consequent product promotion activities.
   D) monopolistically competitive producers are mutually interdependent in their pricing strategies.

   Ans: C Level: Moderate Main Topic: 9.1 Characteristics of monopolistic competition Page: 220 Subtopic: Differentiated products Type: Application

6. A monopolistically competitive industry combines elements of both competition and monopoly. The monopoly element results from:
   A) the likelihood of collusion.
   B) product differentiation.
   C) high entry barriers.
   D) mutual interdependence in decision making.

   Ans: B Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition Page: 220 Subtopic: Differentiated products Type: Application

7. A significant difference between a monopolistically competitive firm and a perfectly competitive firm is that the:
   A) former sells similar, although not identical, products
   B) latter recognizes that price must be reduced to sell more output.
   C) former does not seek to maximize profits.
   D) former's demand curve is perfectly inelastic.

   Ans: A Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition Page: 220 Subtopic: Differentiated products Type: Application

8. The goal of product differentiation and advertising in monopolistic competition is to make:
   A) the firm allocatively efficient even if it is not productively efficient.
   B) the firm productively efficient even if it is not allocatively efficient.
   C) price more of a factor and product differences less of a factor in consumer purchases.
   D) price less of a factor and product differences more of a factor in consumer purchases.

   Ans: D Level: Moderate Main Topic: 9.1 Characteristics of monopolistic competition Page: 220 Subtopic: Differentiated products Type: Application

9. Which of the following is not a basic characteristic of monopolistic competition?
   A) the use of trademarks and brand names
   B) recognized mutual interdependence
   C) product differentiation
   D) a relatively large number of sellers

   Ans: B Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
   Page: 220-221 Subtopic: Differentiated products Type: Application

10. Which set best describes the basic features of monopolistic competition?
   A) easy entry, few firms, and standardized products
   B) barriers to entry, few firms, and differentiated products
   C) easy entry, many firms, and differentiated products
   D) barriers to entry, many firms, and standardized products

   Ans: C Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
   Page: 220-221 Subtopic: Easy entry and exit Type: Application

11. Monopolistic competition resembles perfect competition because:
   A) both industries emphasize nonprice competition.
   B) in both instances firms will operate at the minimum point on their long-run average total cost curves.
   C) both industries entail the production of differentiated products.
   D) barriers to entry are either weak or nonexistent.

   Ans: D Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
   Page: 221 Subtopic: Easy entry and exit Type: Application

12. Under monopolistic competition entry to the industry is:
   A) completely free of barriers.
   B) more difficult than under perfect competition but not nearly as difficult as under monopoly.
   C) more difficult than under monopoly.
   D) blocked.

   Ans: B Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
   Page: 221 Subtopic: Easy entry and exit Type: Application

13. Monopolistically competitive and perfectly competitive industries are similar in that:
    A) both are assured of short-run economic profits.
    B) both produce differentiated products.
    C) the demand curves facing individual firms are perfectly elastic in both industries.
    D) there are few, if any, barriers to entry.

    Ans: D Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
    Page: 221 Subtopic: Easy entry and exit Type: Application

14. Nonprice competition refers to:
    A) competition between products of different industries, for example, competition between aluminum and steel in the manufacture of automobile parts.
    B) price increases by a firm which are ignored by its rivals.
    C) advertising, product promotion, and changes in the real or perceived characteristics of a product.
    D) reductions in production costs which are not reflected in price reductions.

    Ans: C Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
    Page: 221 Subtopic: Advertising Type: Definition

15. Nonprice competition refers to:
    A) low barriers to entry.
    B) product development, advertising, and product packaging.
    C) the differences in information which consumers have regarding various products.
    D) an industry or firm in long-run equilibrium.

    Ans: B Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
    Page: 221 Subtopic: Advertising Type: Definition

16. The monopolistic competition model predicts that:
    A) allocative efficiency will be achieved.
    B) productive efficiency will be achieved.
    C) firms will engage in nonprice competition.
    D) firms will realize economic profits in the long run.

    Ans: C Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
    Page: 221 Subtopic: Advertising Type: Application

17. The book publishing, furniture, and clothing industries are each illustrations of:
    A) countervailing power.
    B) homogeneous oligopoly.
    C) monopolistic competition.
    D) monopoly.

    Ans: C Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
    Page: 222 Subtopic: Monopolistically competitive industries Type: Application

18. An example of a monopolistically competitive industry would be:
    A) steel.
    B) soybeans.
    C) electricity.
    D) retail clothing.

    Ans: D Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition
    Page: 222 Subtopic: Monopolistically competitive industries Type: Application

19. Concentration ratio measures the:
    A) geographic location of the largest corporations in each industry.
    B) degree to which product price exceeds marginal cost in various industries.
    C) percentage of total sales accounted for by the four largest firms in the industry.
    D) number of firms in an industry.

    Ans: C Level: Easy 9.1 Characteristics of monopolistic competition Page: 222
    Subtopic: Monopolistically competitive industries Type: Definition

20. An industry producing a differentiated product whose four-firm concentration ratio is 18 percent is an example of:
    A) monopolistic competition
    B) oligopoly
    C) monopoly
    D) perfect competition

    Ans: A Level: Moderate 9.1 Characteristics of monopolistic competition
    Page: 222 Subtopic: Monopolistically competitive industries Type: Definition

21. An industry comprised of 40 firms, none of which has more than 3 percent of the total market for a differentiated product is an example of:
    A) monopolistic competition
    B) oligopoly
    C) monopoly
    D) perfect competition

    Ans: A Level: Moderate 9.1 Characteristics of monopolistic competition
    Page: 222 Subtopic: Monopolistically competitive industries Type: Application

22. Suppose that firms in this industry miraculously split up such that there were 100 firms, each with a one percent market share. The four-firm concentration ratio and the Herfindahl Index respectively would be:
    A) 100 percent and 10,000.
    B) 4 percent and 4.
    C) 100 percent and 16.
    D) 4 percent and 16.

    Ans: D Level: Difficult 9.1 Characteristics of monopolistic competition
    Page: 222 Subtopic: Monopolistically competitive industries Type: Calculation

23. The Herfindahl index for a monopolist:
    A) would be 100.
    B) would be 10,000.
    C) would be 100,000.
    D) cannot be calculated.

    Ans: B Level: Moderate 9.1 Characteristics of monopolistic competition
    Page: 222 Subtopic: Monopolistically competitive industries Type: Application

24. Industries X and Y both have four-firm concentration ratios of 65 percent, but the Herfindahl index for X is 1,500 while that for Y is 2,000. These data suggest:
    A) greater market power in X than in Y.
    B) greater market power in Y than in X.
    C) that X is more technologically progressive than Y.
    D) that price competition is stronger in Y than in X.

    Ans: B Level: Moderate 9.1 Characteristics of monopolistic competition
    Page: 222 Subtopic: Monopolistically competitive industries Type: Application

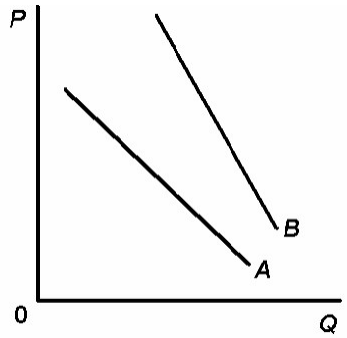
25. If you sum the squares of the market shares of each firm in an industry (as measured by percent of industry sales), you are calculating:
    A) the four-firm concentration ratio.
    B) the Herfindahl index..
    C) the degree of collusion.
    D) the Lerner index

    Ans: B Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition Page: 222 Subtopic: Monopolistically competitive industries Type: Definition

26. A monopolistically competitive firm has a:
    A) highly elastic demand curve.
    B) highly inelastic demand curve.
    C) perfectly inelastic demand curve.
    D) perfectly elastic demand curve.

    Ans: A Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Definition

27. Refer to the graph. A successful advertising campaign by a monopolistically competitive firm will cause the demand curve to shift from:



    A) A to B and become more elastic.
    B) A to B and become less elastic.
    C) B to A and become more elastic.
    D) B to A and become less elastic.

    Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Graphic

28. The monopolistically competitive seller's demand curve will become more elastic the:
    A) more significant the barriers to entering the industry.
    B) greater the degree of product differentiation.
    C) larger the number of competitors.
    D) smaller the number of competitors.

    Ans: C Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

29. The larger the number of firms and the smaller the degree of product differentiation the:
    A) greater the divergence between the demand and the marginal revenue curves of the monopolistically competitive firm.
    B) larger will be the monopolistically competitive firm's fixed costs.
    C) less elastic is the monopolistically competitive firm's demand curve.
    D) more elastic is the monopolistically competitive firm's demand curve.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

30. The demand curve of a monopolistically competitive producer is:
    A) less elastic than that of either a monopolist or a perfectly competitive seller.
    B) more elastic than that of a monopolist, but less elastic than that of a perfectly competitive seller.
    C) less elastic than that of a monopolist, but more elastic than that of a perfectly competitive seller.
    D) more elastic than that of either a monopolist or a perfectly competitive seller.

    Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

31. A monopolistically competitive firm's marginal revenue curve:
    A) is downward sloping and coincides with the demand curve.
    B) coincides with the demand curve and is parallel to the horizontal axis.
    C) is downward sloping and lies below the demand curve.
    D) does not exist because the firm is a "price maker."

    Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

32. In comparing the demand curve of a monopolist with that of a monopolistically competitive firm, we would expect the monopolistic competitor to have a:
    A) perfectly elastic demand curve and the monopolist to have a perfectly inelastic demand curve.
    B) more elastic demand curve.
    C) less elastic demand curve.
    D) demand curve whose elasticity coefficient is one at all possible prices.

    Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

33. The price elasticity of a monopolistically competitive firm's demand curve varies:
    A) inversely with the number of competitors and the degree of product differentiation.
    B) directly with the number of competitors and the degree of product differentiation.
    C) directly with the number of competitors, but inversely with the degree of product differentiation.
    D) inversely with the number of competitors, but directly with the degree of product differentiation.

    Ans: C Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

34. The demand curve faced by a monopolistically competitive firm:
    A) is more elastic than the monopolist's demand curve.
    B) is less elastic than the monopolist's demand curve.
    C) is more elastic than the demand curve faced by the perfectly competitive firm.
    D) will shift outward as new firms enter the industry.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

35. A major difference between perfect competition and monopolistic competition is that under perfect competition:
    A) individual firms have more elastic demand curves.
    B) the market demand curve is less elastic.
    C) there is a smaller number of producers.
    D) there are barriers to entry.

    Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

36. Which would make an individual firm's demand curve less elastic?
    A) the purchase of more efficient machinery
    B) a reduction in the price of the firm's product
    C) increased brand loyalty toward the firm's product
    D) a reduction in advertising expenditures by the firm

    Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

37. An important similarity between a monopolistically competitive firm and a monopolist is that both:
    A) realize an economic profit in the long run.
    B) face demand curves which are less than perfectly elastic.
    C) achieve allocative efficiency.
    D) achieve productive efficiency.

    Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

38. The less elastic a monopolistic competitor's long-run demand curve, the:
    A) less its excess capacity.
    B) higher its price relative to that of a pure competitor having the same cost curves.
    C) higher its long-run profits.
    D) lower its average total cost at its equilibrium level of output.

    Ans: B Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The firm's demand curve Type: Application

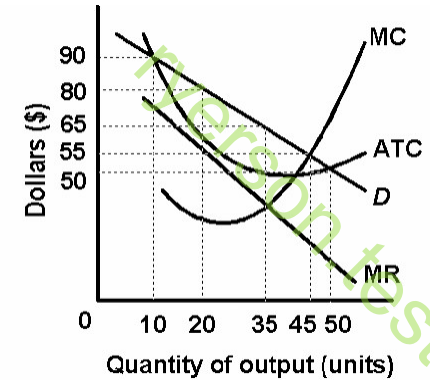
39. Monopolistically competitive firms:
    A) realize normal profits in the short run but losses in the long run.
    B) incur persistent losses in both the short run and long run.
    C) may realize either profits or losses in the short run, but realize normal profits in the long run.
    D) persistently realize economic profits in both the short run and long run.

    Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Application

40. The monopolistically competitive seller maximizes profit by producing at the point where:
    A) total revenue is at a maximum.
    B) average costs are at a minimum.
    C) price equals marginal cost.
    D) marginal revenue equals marginal cost.

    Ans: D Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Application

    Use the following to answer questions 41- 43:



41. For the monopolistically competitive firm depicted above, it can be said that the firm is:

    A) making economic profit in the long run.
    B) making economic profit in the short run.
    C) earning only normal profit in the long run.
    D) earning only normal profit in the short run.

    Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

42. Refer to the graph above. In the short run, this monopolistically competitive firm will set price at:
    A) $65 and produce 45 units of output.
    B) $65 and produce 35 units of output.
    C) $50 and produce 35 units of output.
    D) $50 and produce 50 units of output.

    Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

43. Refer to the graph above. At the profit-maximizing level of short-run output, this monopolistically competitive firm will be making a profit of:
    A) $275.
    B) $350.
    C) $500.
    D) $525.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

44. A monopolistically competitive firm is producing at a short-run output level where average total cost is $10.00, marginal cost is $5.00, marginal revenue is $6.00, and price is $12.00. In the short run, the firm should:
    A) decrease the level of output.
    B) increase the level of output.
    C) make no change in the level of output.
    D) increase product price.

    Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Application

45. A monopolistically competitive firm is operating at a short-run level of output where price is $21, average total cost is $15, marginal cost is $13, and marginal revenue is $13. In the short run this firm should:
    A) reduce product price.
    B) increase the level of output.
    C) decrease the level of output.
    D) make no change in the level of output.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Application

    Use the following to answer questions 46-47:

Price	Quantity Demanded	Total cost	Output
$20	1	$10	1
18	2	20	2
16	3	29	3
14	4	36	4
12	5	40	5
10	6	42	6

46. Refer to the table above. What output will the profit-maximizing monopolistic competitor produce?
    A) 5
    B) 4
    C) 3
    D) 6

    Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Calculation

47. Refer to the table above. What will be the economic profit or loss for this monopolistic competitor at the profit-maximizing level of output?
    A) -$15
    B) +$10
    C) +$20
    D) +$27

    Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Calculation

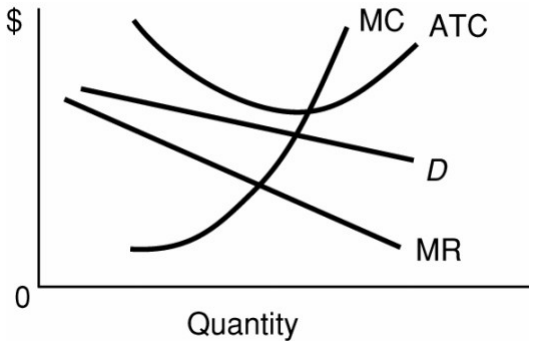
48. In the short run a monopolistically competitive firm's economic profit:
    A) will be maximized where price equals average total cost.
    B) may be positive, zero, or negative.
    C) are always positive.
    D) will always be zero.

    Ans: B Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Application

49. In the short-run, the monopolistically competitive firm will experience:
    A) an economic profit, and also one in the long-run.
    B) a normal profit, but in the long-run only an economic profit.
    C) economic profits and losses, but in the long-run only a normal profit.
    D) economic profits and losses, but in the long-run only an economic profit.

    Ans: C Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Application

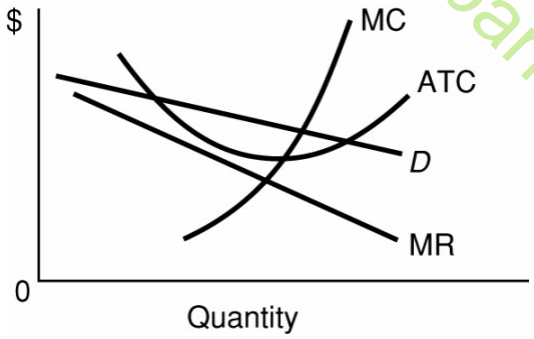
50. The monopolistically competitive firm shown in the figure:



A) is in long-run equilibrium.
B) might realize an economic profit or a loss, depending on its choice of output level.
C) can not realize an economic profit.
D) can not operate profitably.

Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

51. The monopolistically competitive firm shown in the figure:



A) will realize allocative efficiency at its profit-maximizing output.
B) cannot operate at a loss.
C) is in long-run equilibrium.
D) is realizing an economic profit.

Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

Use the following to answer questions 52-54:

DemandData			CostData	
(1) Price	(2) Price	(3) Quantity	Total Output	cost
$11	$10	6	6	$61
9.99	8.85	7	7	62
9	8	8	8	64
8	7	9	9	67
7.10	6.10	10	10	72
6	5	11	11	79
5.15	4.15	12	12	86

52. If columns (1) and (3) of the demand data shown above are this firm's demand schedule, the profit-maximizing level of output will be:
A) 12 units.
B) 8 units.
C) 10 units.
D) 9 units.

Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Calculation

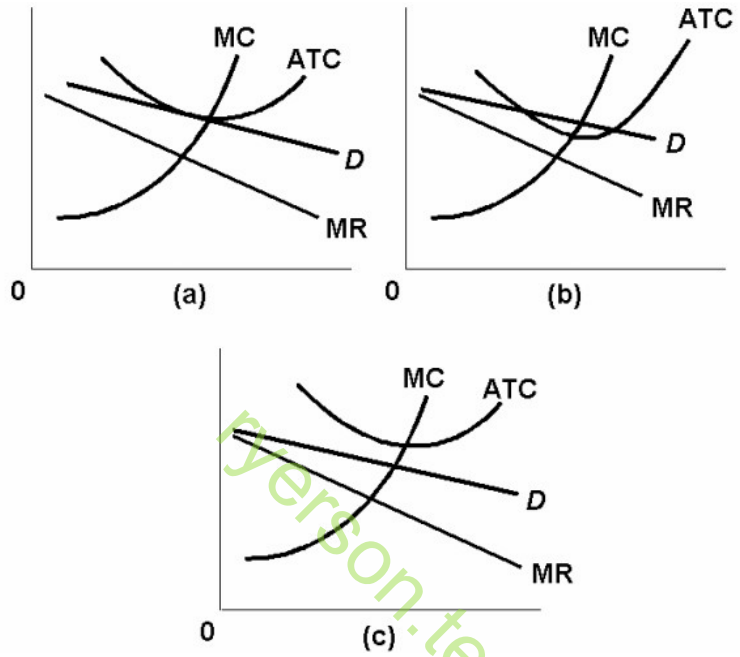
53. If columns (1) and (3) of the demand data shown above are this firm's demand schedule, the profit-maximizing price will be:
A) $9.
B) $7.
C) $11.
D) $6.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Application

54. If columns (1) and (3) of the demand data shown above are this firm's demand schedule, economic profit will be:
A) $10.
B) $19.
C) $6.
D) $8.

Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Calculation

Use the following to answer questions 55-56:



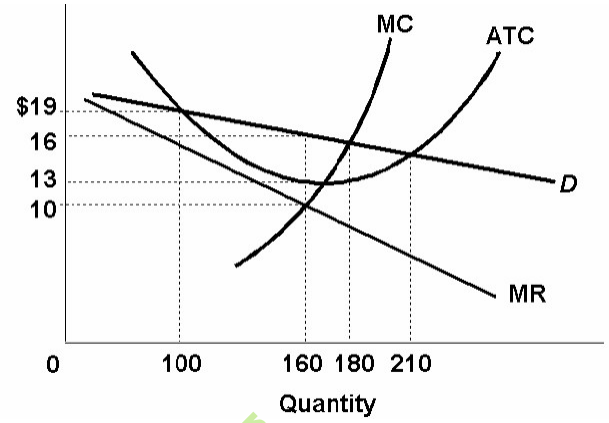
55. Refer to the diagrams above, which pertain to monopolistically competitive firms. Short-run equilibrium entailing economic loss is shown by:
A) diagram c only.
B) diagram b only.
C) diagram a only.
D) both diagrams a and c.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

56. Refer to the diagrams above, which pertain to monopolistically competitive firms. A short-run equilibrium entailing economic profits is shown by:
A) diagram a only.
B) diagram b only.
C) diagram c only.
D) both diagrams b and c.

Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

Use the following to answer questions 57-59:



57. Refer to the above diagram for a monopolistically competitive firm in short-run equilibrium. This firm's profit-maximizing price will be:
A) $16.
B) $13.
C) $10.
D) $19.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

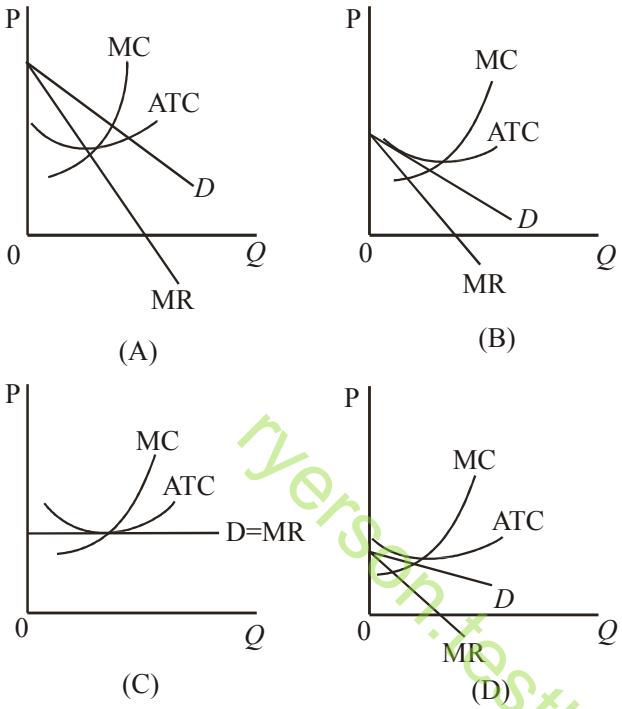
58. Refer to the above diagram for a monopolistically competitive firm in short-run equilibrium. The profit-maximizing output for this firm will be:
A) 210.
B) 180.
C) 100.
D) 160.

Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

59. Refer to the above diagram for a monopolistically competitive firm in short-run equilibrium. This firm will realize an economic:
A) loss of $320.
B) loss of $280.
C) profit of $480.
D) profit of $600.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

Use the following to answer questions 60-63:



60. Refer to the graphs above. A short-run equilibrium that would produce profits for a monopolistically competitive firm would be represented by graph:
A) A.
B) B.
C) C.
D) D.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

61. Refer to the graphs above. A short-run equilibrium that would produce losses for a monopolistically competitive firm would be represented by graph:
A) A.
B) B.
C) C.
D) D.

Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The short run: Profit or loss Type: Graphic

62. Refer to the graphs above. The long-run equilibrium for a monopolistically competitive firm is represented by graph:
A) A.
B) B.
C) C.
D) D.

Ans: B Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223 Subtopic: The long run: Only a normal profit
Type: Graphic

63. Refer to the graphs above. Which graph would not be a possible depiction of short-run or long-run outcomes for a monopolistically competitive firm?
A) A
B) B
C) C
D) D

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit
Type: Graphic

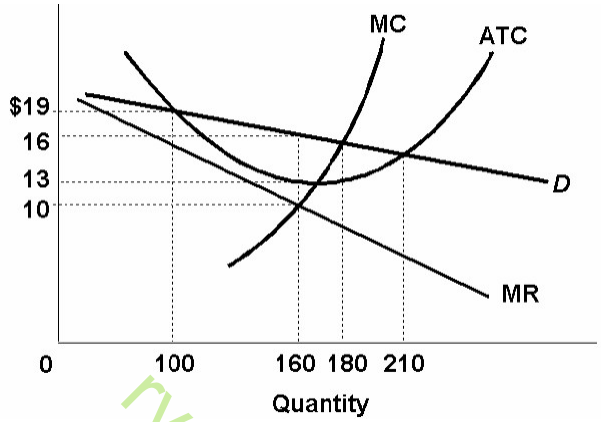
64. In long-run equilibrium a monopolistically competitive firm's price will:
A) be less than both MC and ATC.
B) exceed MC, but equal ATC.
C) exceed ATC, but equal MC.
D) exceed both MC and ATC.

Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit
Type: Application

65. Which of the following is correct for a monopolistically competitive firm in long-run equilibrium?
A) P exceeds minimum ATC.
B) MC exceeds MR
C) MC = ATC
D) P = MC

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit
Type: Formula

66. Refer to the diagram below for a monopolistically competitive firm in short-run equilibrium. Assume the firm is part of an increasing-cost industry. In the long run firms will:



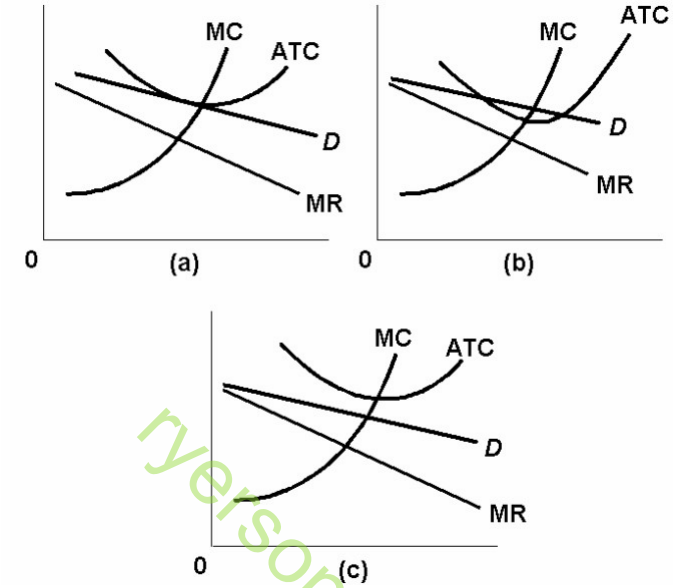
A) leave this industry, causing both demand and the ATC curve to shift upward.
B) enter this industry, causing demand to rise and the ATC curve to shift downward.
C) enter this industry, causing demand to fall and the ATC curve to shift upward.
D) enter this industry, causing both demand and the ATC curve to shift upward.

Ans: C Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Graphic

67. Long-run equilibrium for a monopolistically competitive firm where economic profits are zero results from:
A) relatively easy entry..
B) a perfectly elastic product demand curve.
C) rising marginal costs.
D) product differentiation and development.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

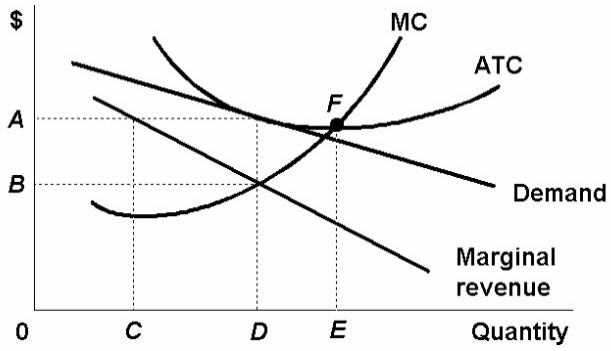
68. Refer to the diagrams, which pertain to monopolistically competitive firms. Long-run equilibrium is shown by:



A) diagram a only.
B) diagram b only.
C) diagram c only.
D) both diagrams b and c.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Graphic

Use the following to answer questions 69-71:



69. Refer to the above diagram for a monopolistically competitive firm. Long-run equilibrium price will be:
A) above A.
B) EF.
C) B.
D) A.

Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Graphic

70. Refer to the above diagram for a monopolistically competitive firm. Long-run equilibrium output will be:
A) greater than E.
B) D.
C) E.
D) C.

Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Graphic

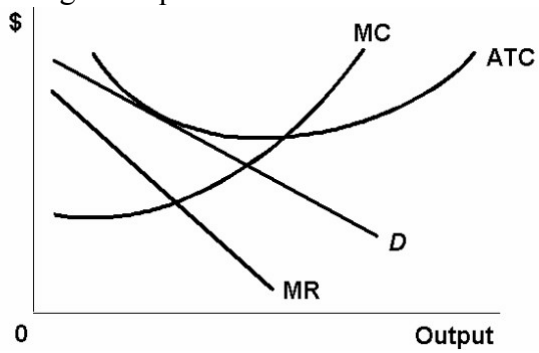
71. Refer to the above diagram for a monopolistically competitive firm. If more firms would enter the industry and product differentiation would weaken:
A) resource misallocation would become more severe.
B) the demand curve would become more elastic.
C) equilibrium output would decline and equilibrium price would rise.
D) equilibrium output would decline and equilibrium price would fall.

Ans: B Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Graphic

72. Suppose some firms exit an industry characterized by monopolistic competition. We would expect the demand curve of a firm already in the industry to:
A) shift to the right.
B) shift to the left.
C) become more elastic.
D) remain the same since entering firms serve other customers in the market.

Ans: A Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

73. In long-run equilibrium the firm shown in the diagram below will:



A) earn a normal profit.
B) go bankrupt.
C) realize a loss.
D) realize an economic profit.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit
Type: Graphic

74. When a monopolistically competitive firm is in long-run equilibrium:
A) production takes place where ATC is minimized.
B) marginal revenue equals marginal cost and price equals average total cost.
C) normal profit is zero and price equals marginal cost.
D) economic profit is zero and price equals marginal cost.

Ans: B Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224Subtopic: The long run: Only a normal profit
Type: Application

75. In the long run new firms will enter a monopolistically competitive industry:
A) provided economies of scale are being realized.
B) even though losses are incurred in the short run.
C) until minimum average total cost is achieved.
D) until economic profits are zero.

Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit
Type: Application

76. If some firms leave a monopolistically competitive industry, the demand curves of the remaining firms will:
    A) be unaffected.
    B) shift to the left.
    C) become more elastic.
    D) shift to the right.

    Ans: D Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

77. When a monopolistically competitive firm is in long-run equilibrium:
    A) P = MC = ATC.
    B) MR = MC and minimum ATC > P.
    C) MR > MC and P = minimum ATC.
    D) MR = MC and P > minimum ATC.

    Ans: D Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Formula

78. Other things equal, if more firms enter a monopolistically competitive industry:
    A) the demand curves facing existing firms would shift to the right.
    B) the demand curves facing existing firms would shift to the left.
    C) the demand curves facing existing firms would become less elastic.
    D) losses would necessarily occur.

    Ans: B Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

79. Which of the following statements is correct?
    A) Perfectly competitive firms, monopolistically competitive firms, and pure monopolies all earn zero economic profits in the long run.
    B) Perfectly competitive firms, monopolistically competitive firms, and pure monopolies all earn positive economic profits in the long run.
    C) In the long run perfectly competitive firms and monopolistically competitive firms earn zero economic profits, while pure monopolies may or may not earn economic profits.
    D) Monopolistically competitive firms earn zero economic profits in both the short run and the long run.

    Ans: C Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

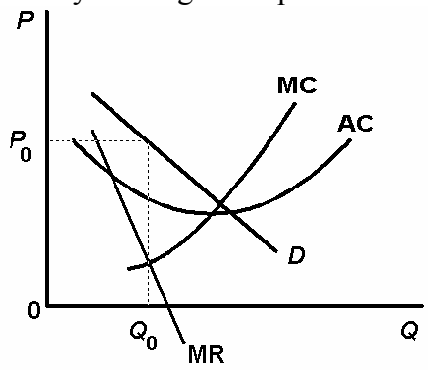
80. For a monopolistically competitive firm in long-run equilibrium:
    A) price will equal marginal cost.
    B) price will equal average total cost.
    C) marginal revenue will exceed marginal cost.
    D) economic profits will be some positive amount.

    Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

81. In long-run equilibrium both perfectly competitive and monopolistically competitive firms will:
    A) produce at minimum average total cost.
    B) earn economic profits.
    C) achieve allocative efficiency.
    D) equate marginal cost and marginal revenue.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

82. The graph below represents a monopolistically competitive firm in a constant-cost industry. In long-run equilibrium this firm will:



    A) continue to earn economic profits because it has monopolistic power to set its price.
    B) become a perfectly competitive firm because there are no significant barriers to entry.
    C) break even because average total cost (ATC) and marginal cost (MC) will increase as more firms enter the market.
    D) break even because its demand curve will fall and become more elastic as it loses sales to other firms entering the market.

    Ans: D Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Graphic

83. The long-run equilibrium position of the monopolistically competitive firm is where average costs are:
A) constant.
B) increasing.
C) decreasing.
D) at their minimum point.

Ans: C Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

84. Which of the following statements concerning a monopolistically competitive industry is correct?
A) If there are short-run losses, firms will leave the industry and the demand curves of the remaining firms will shift to the right.
B) If there are short-run economic profits, firms will enter the industry and the demand curves of existing firms will shift to the right.
C) If there are short-run losses, firms will leave the industry and the demand curves of the remaining firms will shift to the left.
D) If there are short-run economic profits, firms will leave the industry and the demand curves of the remaining firms will shift to the right.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

85. An important similarity between a monopolistically competitive firm and a perfectly competitive firm is that:
A) both face perfectly elastic demand schedules.
B) economic profit tends toward zero for both.
C) both realize productive efficiency.
D) both realize allocative efficiency.

Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

86. In long-run equilibrium in a monopolistically competitive industry:
    A) P = minimum AC.
    B) P > minimum AC.
    C) P = MC.
    D) P < MC.

    Ans: B Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Formula

87. With the demand schedule shown below by columns (2) and (3), in long-run equilibrium:

DemandData				CostData
(1) Price	(2) Price	(3) Quantity	Output	Total cost
$11	$10	6	6	$61
9.99	8.85	7	7	62
9	8	8	8	64
8	7	9	9	67
7.10	6.10	10	10	72
6	5	11	11	79
5.15	4.15	12	12	86

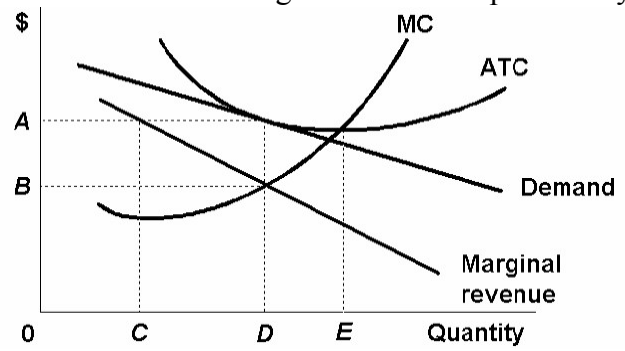
    A) price will equal average total cost.
    B) total cost will exceed total revenue.
    C) marginal cost will exceed price.
    D) price will equal marginal revenue.

    Ans: A Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

88. In long-run equilibrium, a profit-maximizing firm in a monopolistically competitive industry will produce the quantity of output where:
    A) AC = P, MR = MC = P.
    B) AC < P, MR = MC = P.
    C) AC < P, MR + MC < P.
    D) AC = P, MR = MC < P.

    Ans: D Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Formula

89. Refer to the below diagram for a monopolistically competitive producer. The firm is:



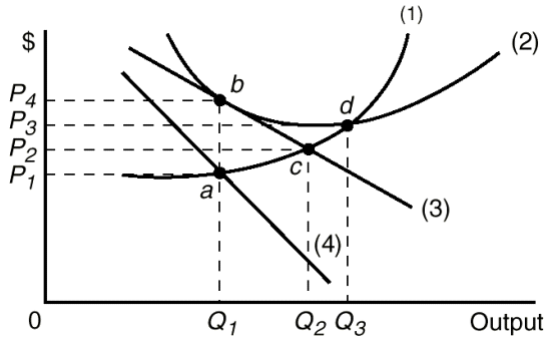
A) minimizing losses in the long run.
B) minimizing losses in the short run.
C) realizing a normal profit in the long run.
D) about to leave the industry.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Graphic

90. In the long run a monopolistically competitive firm:
A) earns an economic profit.
B) produces where P = ATC.
C) produces where MR exceeds MC.
D) achieves allocative efficiency.

Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Application

Use the following to answer questions 91-92:



91. Refer to the above graph of the representative firm in monopolistic competition. The long-run equilibrium price and output for this firm will be:
    A) P_1 and Q_1.
    B) P_2 and Q_2.
    C) P_3 and Q_3.
    D) P_4 and Q_1.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Subtopic: The long run: Only a normal profit Type: Graphic

92. Refer to the above graph of the representative firm in monopolistic competition. Excess capacity for this firm would be illustrated by:
    A) $Q_2 - Q_1$.
    B) $Q_3 - Q_2$.
    C) $Q_3 - Q_1$.
    D) $Q_1 + Q_3$.

    Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 225-226 Subtopic: Monopolistic competition and efficiency Type: Graphic

93. Which of the following is correct?
    A) The excess capacity problem diminishes as the monopolistically competitive firm's demand curve becomes less elastic.
    B) The excess capacity problem means that monopolistically competitive firms typically produce at some point on the rising segment of their average total cost curve.
    C) The greater the degree of product variation, the lesser is the excess capacity problem.
    D) The greater the degree of product variation, the greater is the excess capacity problem.

    Ans: D Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 225-226 Subtopic: Monopolistic competition and efficiency Type: Application

94. Which of the following is not characteristic of monopolistic competition?
    A) relatively large numbers of sellers
    B) product differentiation
    C) production at minimum ATC in the long-run
    D) relatively easy entry to the industry

    Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 225-226 Subtopic: Monopolistic competition and efficiency Type: Application

95. Which of the following is not characteristic of long-run equilibrium under monopolistic competition?
    A) price equals minimum average total cost
    B) marginal cost equals marginal revenue
    C) price is equal to average total cost
    D) price exceeds marginal cost

    Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 225-226 Subtopic: Monopolistic competition and efficiency Type: Application

96. In long-run equilibrium a monopolistically competitive firm will:
    A) earn an economic profit.
    B) realize all economies of scale.
    C) equate price and marginal cost.
    D) have excess production capacity.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 225-226 Subtopic: Monopolistic competition and efficiency Type: Application

97. "Excess capacity" refers to the:
    A) amount by which actual production falls short of the minimum ATC output.
    B) fact that entry barriers artificially reduce the number of firms in an industry.
    C) differential between price and marginal costs which characterizes monopolistically competitive firms.
    D) fact that most monopolistically competitive firms encounter diseconomies of scale.

    Ans: A Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Definition

98. Monopolistic competition is characterized by excess capacity because:
    A) firms are always profitable in the long run.
    B) firms charge a price that is less than marginal cost.
    C) firms produce at an output level less than the least-cost output.
    D) the demand for a product is perfectly elastic in this type of industry.

    Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

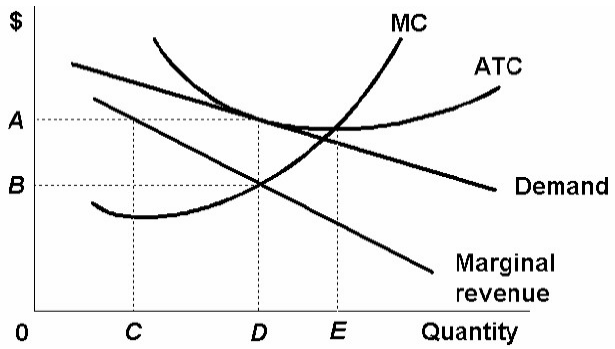
99. In the long run, the representative firm in monopolistic competition tends to have:
    A) excess capacity.
    B) economic profits.
    C) limited product differentiation.
    D) a perfectly elastic demand curve.

    Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

100. The less elastic a monopolistic competitor's long-run demand curve, the:
    A) greater its excess capacity.
    B) lower its price relative to that of a pure competitor having the same cost curves.
    C) higher its long-run economic profit.
    D) lower its average total cost at its equilibrium level of output.

    Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

    Use the following to answer questions 101-102:



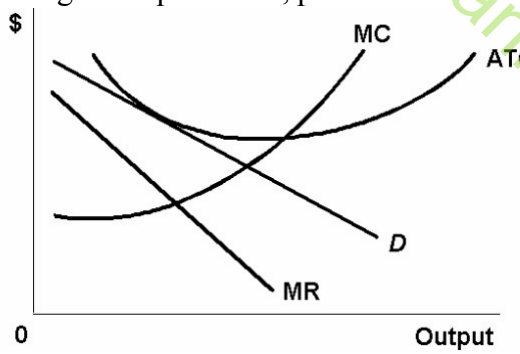
101. Refer to the above diagram for a monopolistically competitive producer. This firm is experiencing:
A) a shortage of production capacity.
B) excess capacity of CD.
C) excess capacity of DE.
D) diseconomies of scale.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Graphic

102. Refer to the above diagram for a monopolistically competitive producer. If this firm were to realize productive efficiency, it would:
A) also realize an economic profit.
B) realize a loss.
C) also achieve allocative efficiency.
D) have to produce a smaller output.

Ans: B Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Graphic

103. In long-run equilibrium, production for the firm shown in the diagram below is:



A) greater than would occur under perfect competition.
B) less efficient than in a perfectly competitive market.
C) more efficient than in a perfectly competitive market.
D) optimally efficient.

Ans: B Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Graphic

104. In long-run equilibrium monopolistic competition entails:
A) an efficient allocation of resources.
B) an overallocation of resources.
C) an underallocation of resources.
D) production at the minimum attainable average total cost.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

105. The more elastic a monopolistic competitor's long-run demand curve, the:
A) greater its excess capacity.
B) the higher its price relative to that of a pure competitor having the same cost curves.
C) lower its long-run profit.
D) lower its average total cost at its equilibrium level of output.

Ans: D Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

106. Monopolistically competitive industries are inefficient because:
A) they realize diseconomies of scale.
B) advertising costs retard technological advance and product development.
C) monopolistically competitive industries are overpopulated with firms whose plants are underutilized.
D) monopolistically competitive sellers engage in misleading advertising.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Definition

107. Inefficiencies occur under monopolistic competition because:
A) each firm's demand curve becomes more elastic as we move down the curve.
B) each firm's marginal revenue curve coincides with its demand curve.
C) each firm's downward sloping demand curve is tangent to the ATC curve in the long run.
D) entry barriers greatly restrict the entry of new firms.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

108. In monopolistic competition there is an underallocation of resources at the profit-maximizing level of output, which means that:
A) minimum ATC is less than MC.
B) minimum ATC is less than MR.
C) price is greater than minimum ATC.
D) price is greater than MC.

Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

109. Monopolistic competitive firms are productively inefficient because production occurs where:
A) marginal cost is greater than marginal revenue.
B) marginal cost is less than marginal revenue.
C) average total cost is greater than the minimum average total cost.
D) average total cost is less than the difference between average total cost and average variable cost.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

110. In monopolistically competitive markets resources are:
A) overallocated because long-run equilibrium occurs where price exceeds marginal cost.
B) underallocated because long-run equilibrium occurs where price exceeds marginal cost.
C) overallocated because long-run equilibrium occurs where marginal cost exceeds price.
D) underallocated because long-run equilibrium occurs where marginal cost exceeds price.

Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

111. In long-run equilibrium a monopolistically competitive producer achieves:
A) neither "productive efficiency" nor "allocative efficiency."
B) both "productive efficiency" and "allocative efficiency."
C) "productive efficiency," but not "allocative efficiency."
D) "allocative efficiency," but not "productive efficiency."

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

112. The economic inefficiency of monopolistic competition means that:
A) industries tend to evolve into oligopolies rather than become more competitive.
B) industries spend money on advertising and sales promotion.
C) producers produce at an output short of, and charge a price greater than, minimum average total cost.
D) firms do not maximize profits at the MC equals MR output.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

113. Which statement is true?
A) Monopoly will result in higher price and a larger output than perfect competition.
B) Monopoly will result in a higher price and a larger output than monopolistic competition.
C) Perfect competition will result in a lower price and a higher output than monopolistic competition.
D) Monopolistic competition will result in a lower price and a lower output than perfect competition.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

114. Which statement concerning monopolistic competition is false?
    A) Long-run equilibrium under monopolistic competition is achieved where economic profits are zero.
    B) Monopolistic competition is likely to result in a greater variety of product brands than perfect competition.
    C) The monopolistic competitive demand curve is more elastic than the demand curve facing a monopolistic firm.
    D) Monopolistic competition does not lead to any economic inefficiency, since firms in this industry cannot sustain economic profits.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

115. Which is true of perfect competition but not of monopolistic competition?
    A) There are barriers to entry.
    B) Long-run economic profits are zero.
    C) There are a large number of firms in the market.
    D) Long-run equilibrium occurs at the minimum point on the ATC curve.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

116. Given identical costs, the long-run equilibrium of a perfectly competitive firm differs from that of a monopolistically competitive firm in that:
    A) price and output are both greater under perfect competition.
    B) price is greater, but quantity is the same, under perfect competition.
    C) both price and quantity are lower under perfect competition.
    D) price is lower, but quantity is greater, under perfect competition.

    Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

117. Were a monopolistically competitive industry in long-run equilibrium, a firm in that industry might be able to increase its economic profits by:
    A) decreasing the price of its product.
    B) increasing the price of its product.
    C) increasing the demand for its product.
    D) decreasing the production of its product.

    Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Subtopic: Monopolistic competition and efficiency Type: Application

118. The economic inefficiencies of monopolistic competition may be offset by the fact that:
A) advertising expenditures shift the average cost curve upward.
B) available capacity is fully utilized.
C) resources are optimally allocated to the production of the product.
D) consumers have a number of variations of the product from which to choose.

Ans: D Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 227 Subtopic: Benefits of product variety Type: Application

119. Compared to perfect competition, monopolistic competition:
A) provides greater product differentiation at the cost of some excess capacity.
B) offers less product differentiation but attains equal productive efficiency.
C) provides greater product differentiation and achieves greater productive efficiency.
D) offers less product differentiation and lower productive efficiency.

Ans: A Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 227 Subtopic: Benefits of product variety Type: Application

120. When the excess capacity problem under monopolistic competition becomes greater, there will be:
A) a narrower range of consumer choice.
B) fewer advertisements and promotions.
C) a wider range of consumer choice.
D) more entry by firms into the market.

Ans: C Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 227 Subtopic: Benefits of product variety Type: Application

121. The variety of products and product features which consumers may choose from in monopolistically competitive industries:
A) at least partially offsets the economic inefficiencies of this market structure.
B) leads to an optimal allocation of resources in the market structure.
C) guarantees that firms produce at full-capacity output levels.
D) makes the demand curves facing firms in these industries more elastic.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 227 Subtopic: Benefits of product variety Type: Application

122. In practice, the monopolistic competitive firms have to juggle three factors in order to maximize their profit. These factors are:
A) the behaviour of other competitors, price of the product, and the demand curve.
B) price of the product, quantity of output, and advertising.
C) advertising, price of the product , and marginal revenue.
D) marginal revenue, quantity of output, and advertising.

Ans: B Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 227 Subtopic: Further complexity Type: Application

123. The complexity in the ability of the firms to engage in nonprice competition under the monopolistic competition market structure is attributed to:
A) the assumption of a given product and a given level of advertising expenditure.
B) the assumption of a given price and quality of the product.
C) the assumption of a given marginal revenue.
D) the assumption of a given number of competitors.

Ans: A Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 227 Subtopic: Further complexity Type: Application

124. Oligopolistic industries are characterized by:
A) a few dominant firms and substantial entry barriers.
B) a few dominant firms and no barriers to entry.
C) a large number of firms and low entry barriers.
D) a few dominant firms and low entry barriers.

Ans: A Level: Easy Main Topic: 9.3 Oligopoly Page: 228 Subtopic: A few large producers Type: Definition

125. The characteristic most closely associated with oligopoly is:
A) easy entry into the industry.
B) a few large producers.
C) product standardization.
D) no control over price.

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 228 Subtopic: A few large producers Type: Application

126. An industry comprised of a small number of firms, each of which considers the potential reactions of its rivals in making price-output decisions is called:
A) monopolistic competition
B) oligopoly
C) monopoly
D) perfect competition

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: A few large producers Type: Application

127. The term "oligopoly" indicates:
A) a one-firm industry.
B) many producers of a differentiated product.
C) a few firms producing either a differentiated or a homogeneous product.
D) an industry whose four-firm concentration ratio is low.

Ans: C Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Definition

128. Product differentiation is present in:
A) perfectly competitive markets only.
B) monopolistically competitive markets only.
C) oligopolistic markets only.
D) both monopolistically competitive and oligopolistic markets.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

129. The copper, aluminum, cement, and industrial alcohol industries are examples of:
A) interproduct competition.
B) homogeneous oligopoly.
C) monopolistic competition.
D) differentiated oligopoly.

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

130. Which of the following industries is an illustration of homogeneous oligopoly?
A) household laundry equipment
B) cigarettes
C) aluminum
D) the auto industry

Ans: C Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

131. Homogeneous oligopoly exists where a small number of firms are:
A) producing virtually identical products.
B) setting price and output independently.
C) setting price and output collusively.
D) producing differentiated products.

Ans: A Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Definition

132. Which products are produced in an industry that best illustrates the concept of homogeneous oligopoly?
A) television receivers
B) cigarettes
C) copper
D) automobiles

Ans: C Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

133. In an oligopolistic market:
A) one firm is always dominant.
B) products may be standardized or differentiated.
C) the four largest firms account for 20 percent or less of total sales.
D) the industry is monopolistically competitive.

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

134. The automobile, household appliance, and brewery industries are all illustrations of:
A) homogeneous oligopoly.
B) monopolistic competition.
C) monopoly.
D) differentiated oligopoly.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

135. Which of the following is the best example of oligopoly?
A) women's dress manufacturing
B) automobile manufacturing
C) restaurants
D) cotton farming

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

136. Oligopolistic industries:
A) are characterized by a relatively large number of small sellers.
B) may produce either standardized or differentiated products.
C) always produce differentiated products.
D) always produce standardized products.

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

137. Which industry would be the best example of an oligopoly?
A) steel
B) beef
C) fast food
D) retail clothing Main Topic: 9.3 Oligopoly Page: 228

Ans: A Level: Easy
Subtopic: Homogeneous or differentiated products Type: Application

138. Which of the following is an example of a differentiated oligopoly?
A) the beer industry
B) the primary aluminum industry
C) the polyester fibre industry
D) the cement industry

Ans: A Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

139. Which of the following is an illustration of differentiated oligopoly?
A) the aluminum industry
B) the steel industry
C) the soft drink industry
D) retail stores in large cities

Ans: C Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Application

140. Differentiated oligopoly exists where a small number of firms are:
A) producing goods which differ in terms of quality and design.
B) setting price and output collusively.
C) setting price and output independently.
D) producing virtually identical products.

Ans: A Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Homogeneous or differentiated products Type: Definition

141. The mutual interdependence which characterizes oligopoly arises because:
A) the products of various firms are homogeneous.
B) the products of various firms are differentiated.
C) a small number of firms produce a large proportion of industry output.
D) the demand curves of firms are kinked at the prevailing price.

Ans: C Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Control over price, but mutual interdependence Type: Application

142. Oligopoly is difficult to analyze primarily because:
A) the number of firms is too large to make collusion understandable.
B) the price and output decisions of any one firm depend on the reactions of its rivals.
C) output may be either homogenous or differentiated.
D) neither allocative nor productive efficiency is achieved.

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page:228
Subtopic: Control over price, but mutual interdependence Type: Application

143. Oligopoly is more difficult to analyze than other market models because:
A) the number of firms is so large that market behaviour cannot be accurately predicted.
B) the marginal cost and marginal revenue curves of an oligopolist play no part in the determination of equilibrium price and quantity.
C) of mutual interdependence and the fact that oligopoly outcomes are less certain than in other market models.
D) unlike the firms of other market models, it cannot be assumed that oligopolists are profit maximizers.

Ans: C Level: Moderate Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Control over price, but mutual interdependence Type: Application

144. A unique feature of an oligopolistic industry is:
A) low barriers to entry.
B) standardized products.
C) diminishing marginal returns.
D) mutual interdependence.

Ans: D Level: Moderate Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Control over price, but mutual interdependence Type: Application

145. Which would be most characteristic of oligopoly?
A) easy entry into the industry
B) many large producers
C) product standardization
D) mutual interdependence

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Control over price, but mutual interdependence Type: Application

146. Which of the following is a unique feature of oligopoly?
A) mutual interdependence
B) advertising expenditures
C) product differentiation
D) nonprice competition

Ans: A Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Control over price, but mutual interdependence Type: Application

147. "Mutual interdependence" means that each oligopolistic firm:
A) faces a perfectly elastic demand for its product.
B) must consider the reactions of its rivals when it determines its price policy.
C) produces a product identical to those of its rivals.
D) produces a product similar but not identical to the products of its rivals.

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Control over price, but mutual interdependence Type: Definition

148. Which is a likely characteristic of a differentiated oligopolistic market?
A) There are minimal barriers to entry.
B) The market demand curve is inelastic.
C) There is minimal advertising expenditure.
D) Price and output decisions of firms are interdependent.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Control over price, but mutual interdependence Type: Application

149. A major distinction between a monopolistically competitive firm and an oligopolistic firm is that:
A) one is a price taker and the other is a price maker.
B) a recognized interdependence exists between firms in one industry but not in the other.
C) one always produces differentiated products and the other always produces a homogeneous product.
D) one necessarily faces a downward-sloping demand curve and the other a horizontal demand curve.

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Control over price, but mutual interdependence Type: Application

150. Clear-cut mutual interdependence with respect to the price-output policies exists in:
A) monopoly
B) oligopoly
C) monopolistic competition
D) perfect competition

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Subtopic: Control over price, but mutual interdependence Type: Application

151. In which of the following industry structures is the entry of new firms the most difficult?
A) monopoly
B) oligopoly
C) monopolistic competition
D) perfect competition

Ans: A Level: Easy Main Topic: 9.3 Oligopoly Page: 228-229
Subtopic: Entry barriers Type: Application

152. In which set of market models are there the most significant barriers to entry?
A) monopolistic competition and perfect competition.
B) monopolistic competition and monopoly.
C) oligopoly and monopolistic competition.
D) oligopoly and monopoly.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 228-229
Subtopic: Entry barriers Type: Application

153. Barriers to entry in oligopolistic industries may consist of:
A) economies of scale.
B) patents.
C) ownership of essential resources.
D) all of the above.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 228-229
Subtopic: Entry barriers Type: Application

154. If there are significant economies of scale in an industry, then:
A) a firm which is large may be able to produce at a lower unit cost than can a small firm.
B) a firm which is large will have to charge a higher price than will a small firm.
C) entry to that industry will be easy.
D) firms must differentiate their products to earn economic profits.

Ans: A Level: Moderate Main Topic: 9.3 Oligopoly Page: 228-229
Subtopic: Entry barriers Type: Application

155. Steel, airlines, banking, and entertainment industries are different examples of:
A) oligopolistic industries producing homogeneous products.
B) monopolistic competitive industries producing homogeneous products.
C) industries which have gained substantial market power through merging.
D) industries producing under perfectly competitive market structure.

Ans: C Level: Easy Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Mergers Type: Application

156. Concentration ratios:
A) may overstate the degree of competition because they ignore imported products.
B) may overstate the degree of competition because inter-industry competition is ignored.
C) may understate the degree of competition because they ignore imported products.
D) provide detailed insights as to the price and output behaviour of firms which comprise the various industries.

Ans: C Level: Moderate Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Application

157. If the four-firm concentration ratio for industry X is 80:
A) the four largest firms account for 80 percent of total sales.
B) each of the four largest firms accounts for 20 percent of total sales.
C) the four largest firms account for 20 percent of total sales.
D) the industry is monopolistically competitive.

Ans: A Level: Easy Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Application

158. An industry having a four-firm concentration ratio of 85 percent:
A) approximates perfect competition.
B) is monopolistically competitive.
C) is a monopoly.
D) is an oligopoly.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Definition

159. As a general rule, oligopoly exists when the four-firm concentration ratio:
A) exceeds the Herfindahl index.
B) is less than the Herfindahl index.
C) is 40 percent or more.
D) is 15 percent or more.

Ans: C Level: Easy Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Definition

160. The four-firm sales concentration ratio for an industry measures the:
A) geographic concentration of firms.
B) extent to which the four largest firms dominate the production of a good.
C) percentage of the industry's capital facilities owned by the four largest firms.
D) degree of X-inefficiency in the industry.

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Application

161. "Interindustry competition" means that:
A) in oligopolistic industries a few large firms compete with one another in bidding down product price.
B) in some markets the producers of a particular product might face competition from products produced by other industries.
C) business firms that sell a product at one stage of production are faced with business firms that buy the product at the next stage of production.
D) in most industries there are usually a number of firms producing identical products.

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Definition

162. "Interindustry competition" refers to the fact that:
A) oligopolistic producers establish a common price for their products.
B) products are identical in a perfectly competitive industry.
C) firms which sell a product at one stage of production buy materials and parts from other firms at prior stages of production.
D) in some markets the producers of a certain commodity might face competition from products of other industries.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Definition

163. Concentration ratios may be inaccurate indicators of the degree of monopoly power in an industry because:
A) they include interindustry competition.
B) foreign competition is not considered.
C) they are only calculated for local and regional markets.
D) they do not distinguish between normal and economic profit.

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Application

164. The increased use of plastic bags instead of paper bags in grocery stores and retail shops is an example of:
A) overt collusion.
B) covert collusion.
C) import competition.
D) interindustry competition.

Ans: D Level: Moderate Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Application

165. One major problem with concentration ratios is that they fail to take into account:
A) the localized market for products.
B) excess capacity in production.
C) price leadership.
D) mutual interdependence.

Ans: A Level: Moderate Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Application

166. Aluminum competes with copper in the market for power transmission lines. This illustrates:
A) mutual interdependence.
B) differentiated oligopoly.
C) interindustry competition.
D) homogeneous oligopoly.

Ans: C Level: Easy Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Application

167. If a product such as cement or bricks is costly to ship and, therefore, markets are very localized, the national concentration ratio for that industry:
A) will be greater than 50 percent.
B) may understate the degree of monopoly.
C) may overstate the degree of monopoly.
D) will yield an accurate impression of the degree of monopoly.

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page: 229
Subtopic: Oligopolistic industries Type: Application

168. If an industry evolves from monopolistic competition to oligopoly, we would expect:
A) the four-firm concentration ratio to decrease.
B) the four-firm concentration ratio to increase.
C) the four-firm concentration ratio might either increase or decrease.
D) that barriers to entry have weakened.

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Application

169. Suppose that total sales in an industry in a particular year are $600 million and sales by the top four sellers are $200 million, $150 million, $100 million, and $50 million, respectively. We can conclude that:
A) price leadership exists in this industry.
B) the concentration ratio is more than 80 percent.
C) this industry is a differentiated oligopoly.
D) the firms in this industry face a downward sloping demand curve.

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Calculation

170. An industry comprised of four firms, each of which has approximately 25 percent of the total market for a product is an example of:
A) monopolistic competition
B) oligopoly
C) monopoly
D) perfect competition

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Application

171. An industry producing a homogeneous product whose four-firm concentration ratio is 76 percent is an example of:
A) monopolistic competition
B) oligopoly
C) monopoly
D) perfect competition

Ans: B Level: Easy Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Application

Use the following to answer questions 172-173:

Firm	Marketshare(%)
A	20
B	20
C	20
D	20
E	10
F	10

172. The industry characterized by the information above is:
A) an oligopoly.
B) a monopolistically competitive industry.
C) a perfectly competitive industry.
D) a monopoly.

Ans: A Level: Moderate Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Application

173. The four-firm concentration ratio for the industry above is:
A) 100 percent.
B) indeterminate, since we don't know which four firms are included.
C) 80 percent.
D) 20 percent.

Ans: C Level: Moderate Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Calculation

174. The larger the Herfindahl index, the:
A) less the degree of import competition in an industry.
B) greater the degree of import competition in an industry.
C) less the degree of market power in an industry.
D) greater the degree of market power in an industry.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Application

175. Assume that an industry was significantly affected by import competition from foreign suppliers. Taking this factor into account, it would mean that:
A) the Herfindahl index would be significantly higher in that industry because there are more firms in the industry.
B) the industry is less concentrated than suggested by domestic concentration ratios.
C) there is a high degree of interindustry competition.
D) there is a low degree of interindustry competition

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Application

176. The Herfindahl index is a measure of:
A) profitability in an industry.
B) the price level in an industry.
C) the cost level in an industry.
D) market power in an industry.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Definition

177. The Herfindahl index:
A) measures the prices charged by oligopolistic manufacturers.
B) is another name for the four-firm concentration ratio.
C) tells us whether oligopolistic firms are engaging in collusion.
D) gives much greater weight to larger firms than to smaller firms in an industry.

Ans: D Level: Easy Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Application

178. If the four-firm concentration ratio in an oligopolistic industry is 100 percent and each firm has an equal volume of sales, the Herfindahl Index is:
A) 10,000.
B) 2,500.
C) 3,750.
D) 1,000. Main Topic: 9.3 Oligopoly Page: 230

Ans: B Level: Moderate
Subtopic: Oligopolistic industries Type: Calculation

179. Assume six firms comprising an industry have market shares of 30, 30, 10, 10, 10, and 10 percent. The Herfindahl Index for this industry:
A) is 2,525.
B) is 1,600.
C) is 2,200.
D) is 80.

Ans: C Level: Moderate Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Calculation

180. Industry X is dominated by four large firms that hold market shares of 30, 30, 20, and 20. The Herfindahl index for this industry is:
A) 100.
B) 2600.
C) 3200.
D) 4400.

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Calculation

181. Industry Y is dominated by five large firms that hold market shares of 20, 20, 25, 25, and 10. The Herfindahl index for this industry is:
A) 1560.
B) 2150.
C) 2340.
D) 3500.

Ans: B Level: Moderate Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Calculation

182. The Herfindahl index for an industry is 2550. Which of the following sets of market shares and industry with four firms would produce such an index?
A) 20, 20, 30, and 30
B) 25, 25, 25, and 25
C) 20, 25, 25, and 30
D) 10, 20, 30, and 40

Ans: C Level: Difficult Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Calculation

183. The Herfindahl index for an industry is 2750. Which of the following sets of market shares and industry with four firms would produce such an index?
A) 10, 30, 30, and 30
B) 15, 25, 25, and 35
C) 5, 25, 30, and 40
D) 15, 20, 30, and 35

Ans: D Level: Difficult Main Topic: 9.3 Oligopoly Page: 230
Subtopic: Oligopolistic industries Type: Calculation

184. Industry Y is dominated by four large firms that hold market shares of 15, 20, 30 and, 35. If all the firms in industry Y merged into a single firm, the Herfindahl Index would become:
A) 100.
B) 1,000.
C) 10,000.
D) 100,000.

Ans: C Level: Difficult Main Topic: 9.3 Oligopoly Page: 230 Subtopic: Oligopolistic industries Type: Calculation

185. Game theory can be used to demonstrate:
A) that oligopolistic firms are mutually interdependent.
B) that independent pricing will lead to low-price policies.
C) that oligopolists can increase their profits through collusion.
D) all of the above.

Ans: D Level: Easy Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 231 Subtopic: Basic concepts Type: Application

186. In an oligopoly game, each player tries to:
A) maximize its own profits.
B) minimize the market shares of its opponents.
C) minimize the profits of its opponents.
D) maximize its own market share.

Ans: A Level: Easy Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 231 Subtopic: Basic concepts Type: Application

187. In game theory, the dominant strategy equilibrium refers to a situation in which:
one player's strategy dominates the others.
A) one player is smarter than the others.
B) there is a best strategy for all the players in the game regardless of the strategy
C) chosen by other players.
D) there can be a best strategy only for one player regardless of the strategy chosen by other players.

Ans: C Level: Moderate Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 231 Subtopic: Basic concepts Type: Application

188. Prisoner's dilemma refers to a type of game where:
A) whatever the other player does, each player is better off confessing.
B) regardless of what a player does, the other should not confess.
C) one player is smarter than the other.
D) whether the players confess or not will not change the outcome.

Ans: A Level: Difficult Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 232 Subtopic: Prisoner's dilemma Type: Application

189. The dominant strategy equilibrium in the prisoner's dilemma is:
A) related to the personality of the players.
B) confession by both players.
C) denial by both players.
D) one player denies while the other confesses.

Ans: B Level: Difficult Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 232 Subtopic: Prisoner's dilemma Type: Application

190. In the prisoner's dilemma each player ideally is best off if:
A) if both prisoners deny.
B) if both prisoners confess.
C) if one prisoner denies and the other confess.
D) if the district attorney is Angie Harmon.

Ans: A Level: Difficult Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 232 Subtopic: Prisoner's dilemma Type: Application

191. In a duopoly, if one firm increases its price, then the other firm can:
A) keep its price constant and thus increase its market share.
B) keep its price constant and thus decrease its market share.
C) increase its price and thus increase its market share.
D) decrease its price and thus decrease its market share.

Ans: A Level: Moderate Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 233 Subtopic: Strategies in a two-firm oligopoly Type: Application

Use the following to answer questions 192-194:

Y's prices

X's prices \ Y	$6	$5	$4
$7	12 / 16	14 / 15	15 / 13
$6	9 / 19	11 / 16	13 / 14
$5	7 / 18	9 / 17	10 / 15

192. Refer to the above profits-payoff table for a duopoly. If the firms are acting independently and firm X sets its price at $6, firm Y will achieve the largest profit by selecting:
A)a price higher than $6.
B)a price between $5 and $6. C)
$6.
D) $4.

Ans: D Level: Difficult Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 233 Subtopic: Strategies in a two-firm oligopoly Type: Application

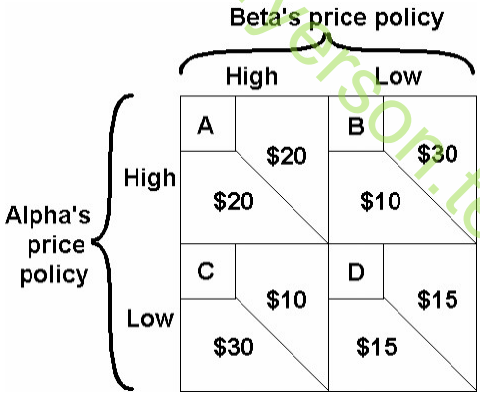
193. Refer to the above profits-payoff table for a duopoly. If initially firms X and Y are charging $5 and $4 respectively:
A) the two firms will be maximizing joint profits.
B) Y will find it advantageous to raise its price if it was certain X would not alter its price.
C) X will find it advantageous to raise its price if it was certain Y would not alter its price.
D) both firms would find it advantageous to collude to raise their prices by $1 each.

Ans: D Level: Difficult Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 233 Subtopic: Strategies in a two-firm oligopoly Type: Application

194. Refer to the above profits-payoff table for a duopoly. If initially firm X's price was $6 and Y's price was $5:
A) X would find it profitable to cut price, provided Y also cut price.
B) Y would find it profitable to cut price, provided X also cut price.
C) Y would find it profitable to raise price by $1, provided X would also raise price by $1.
D) both firms would profit by simultaneously lowering their prices by $1.

Ans: C Level: Difficult Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 233 Subtopic: Strategies in a two-firm oligopoly Type: Application

Use the following to answer questions 195-200:



195. The matrix above best illustrates:
A) game theory.
B) the principal-agent problem.
C) product differentiation.
D) price discrimination.

Ans: A Level: Easy Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 233 Subtopic: Mutual interdependence revisited Type: Application

196. Refer to the diagram above where the numerical data show profits in millions of dollars. Beta's profits are shown in the northeast corner and Alpha's profits in the southwest corner of each cell. If both firms follow a high-price policy:
A) Alpha will realize a $10 million profit and Beta a $30 million profit.
B) each will realize a $20 million profit.
C) Beta will realize a $10 million profit and Alpha a $30 million profit.
D) each will realize a $15 million profit.

Ans: B Level: Moderate Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 233 Subtopic: Mutual interdependence revisited
Type: Application

197. Refer to the diagram above wherein the numerical data show profits in millions of dollars. Beta's profits are shown in the northeast corner and Alpha's profits in the southwest corner of each cell. If Beta commits to a high-price policy, Alpha will gain the largest profit by:
A) also adopting a high-price policy.
B) adopting a low-price policy.
C) adopting a low-price policy, but only if Beta agrees to do the same.

Ans: B Level: Moderate Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 233 Subtopic: Mutual interdependence revisited
Type: Application

198. Refer to the diagram above where the numerical data show profits in millions of dollars. Beta's profits are shown in the northeast corner and Alpha's profits in the southwest corner of each cell. With independent pricing the outcome of this duopoly game will gravitate to cell:
A) A.
B) B.
C) C.
D) D.

Ans: D Level: Difficult Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 233 Subtopic: Mutual interdependence revisited
Type: Application

199. Refer to the diagram above where the numerical data show profits in millions of dollars. Beta's profits are shown in the northeast corner and Alpha's profits in the southwest corner of each cell. If Alpha and Beta engage in collusion, the outcome of the game will be at cell:
A) A.
B) B.
C) C.
D) D.

Ans: A Level: Difficult Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 234 Subtopic: Collusion Type: Application

200. Refer to the diagram above where the numerical data show profits in millions of dollars. Beta's profits are shown in the northeast corner and Alpha's profits in the southwest corner of each cell. If Alpha and Beta agree to a high-price policy through collusion, the temptation to cheat on that agreement is demonstrated by the fact that:
A) Beta can increase its profit by lowering its price.
B) Beta can increase its profit by increasing its price still further.
C) both Alpha and Beta can earn even more profits if both agree to a low-price policy.
D) Alpha can increase its profit by reducing its production costs.

Ans: A Level: Difficult Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 234 Subtopic: Collusion Type: Application

201. When firms in an industry reach an agreement to fix prices, divide up market share, or otherwise restrict competition, they are practicing the strategy of:
A) interindustry competition.
B) limit pricing.
C) price leadership.
D) collusion.

Ans: D Level: Easy Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 234 Subtopic: Collusion Type: Definition

202. In imperfectly competitive industries, producers' agreements to restrict output tend to be unstable because each firm has an incentive to:
A) produce more than its output quota.
B) lower both its price and its output.
C) raise prices above the cooperative price.
D) establish competitive price and output levels.

Ans: A Level: Easy Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 234 Subtopic: Incentive to cheat Type: Application

203. Oligopolistic firms engage in collusion to:
A) minimize unit costs of production.
B) realize allocative efficiency, that is, the P = MC level of output.
C) earn greater profits.
D) increase production.

Ans: C Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 235-236 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

204. Suppose the only three existing manufacturers of widgets signed a written contract by which each agreed to charge the same price for products and to distribute their products only in the geographical area assigned them in the contract. This best describes:
A) cost-plus pricing.
B) multiproduct pricing.
C) a cartel.
D) price leadership.

Ans: C Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 235-236 Subtopic: Cartels and other collusion: Cooperative strategies Type: Definition

205. Which of the following statements is correct?
A) A cartel is usually a formal agreement among oligopolists which sets product price and determines each firm's market share.
B) The practice of price leadership is almost always based on a formal written agreement.
C) Most of the important technological advances of the last half century are attributable to the research efforts of large oligopolistic corporations.
D) Active and frequent price competition between firms is a basic characteristic of oligopoly.

Ans: A Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 235-236 Subtopic: Cartels and other collusion: Cooperative strategies Type: Definition

206. Which of the following will make it easier for a cartel to operate effectively over time?
A) Demand for the cartel's product decreases.
B) Demand for the cartel's product becomes more elastic.
C) The number of substitutes for the cartel's product increases.
D) Each member firm observes the pricing and output decisions of other firms in the cartel.

Ans: D Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 235-236 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

207. Collusive control over price may permit oligopolists to:
A) use new technology, achieve economies of scale, and get government subsidies.
B) achieve economies of scale, reduce costs, and prevent price cheating.
C) increase product demand, increase product supply, and lower cost.
D) reduce uncertainty, increase profits, and possibly limit entry of new firms.

Ans: D Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 236 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

208. Suppose a few powerful firms control all production in an industry and face identical demand and cost schedules. If they successfully collude and maximize joint profits, then price, output, and profit levels in the industry will be the same as those in:
A) monopoly.
B) regulated monopoly.
C) monopolistic competition.
D) a covert collusion

Ans: A Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 236 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

209. If the firms in an oligopolistic industry can establish an effective cartel, we would expect the resulting output and price to approximate those of:
A) a perfectly competitive producer.
B) a monopoly.
C) a monopolistically competitive producer.
D) an industry with a low four-firm concentration ratio.

Ans: B Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 236 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

210. If the several oligopolistic firms which comprise an industry behave collusively, the resulting price and output will most likely resemble those of:
A) bilateral monopoly.
B) monopoly.
C) monopolistic competition.
D) perfect competition.

Ans: B Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 236 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

211. OPEC provides an example of:
A) a tacit understanding.
B) non-collusive oligopoly.
C) an international cartel.
D) a monopolistically competitive industry.

Ans: C Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

212. OPEC was able to greatly increase its total revenue by increasing prices in the 1970s because:
A) it controlled 100 percent of the world's oil reserves.
B) the demand for oil was elastic.
C) the prices of coal and solar power were falling.
D) the demand for oil was inelastic.

Ans: D Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

213. The Organization of Petroleum Exporting Countries (OPEC) behaves in many ways like an international cartel. If the cartel were to hire a consulting firm to monitor the production rates of member countries, the economic reason for this monitoring is to:
A) make sure that each member country is producing at an output level at which price equals marginal cost.
B) make sure all the member countries produce at least their quotas so that there will be no oil shortage.
C) detect those member countries which are depressing prices by producing more than their assigned quotas.
D) make sure that the marginal revenue for the last barrel of oil sold by each member country is less than its price.

Ans: C Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

214. Which would make it easier to maintain an effective collusive agreement in a cartel?
A) the emergence of a number of potential entrant firms
B) a decrease in the elasticity of demand for the cartel's product
C) an increase in the number of substitutes for products produced by the cartel
D) a new method of pricing that makes it more difficult for firms in the cartel to determine the prices at which other cartel members are selling their product

Ans: B Level: Difficult Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237-238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

215. The likelihood of a cartel being successful is greater when:
A) firms are producing a differentiated, rather than a homogeneous, product.
B) cost and demand curves of various participants are very similar.
C) the number of firms involved is relatively large.
D) the economy is in the recession phase of the business cycle.

Ans: B Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237-238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

216. Cartels are difficult to maintain in the long run because:
A) they are illegal in all industrialized countries.
B) individual members may find it profitable to "cheat."
C) it is more profitable for the industry to charge a lower price and produce more output.
D) entry barriers are insignificant in oligopolistic industries.

Ans: B Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237-238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

217. In Canada cartels are:
A) quite common in industries which produce nondurable goods.
B) in violation of anti-combines laws.
C) concentrated in monopolistically competitive industries.
D) encouraged by government policy so that firms can realize economies of scale.

Ans: B Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237-238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

218. One would expect that collusion among oligopolistic producers would be easiest to achieve in which of the following cases?
A) a rather large number of firms producing a differentiated product
B) a very few firms producing a differentiated product
C) a rather large number of firms producing a homogeneous product
D) a very few firms producing a homogeneous product

Ans: D Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237-238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

219. A cartel is formed among the major firms in an industry that maximizes joint profits of the firms. Each firm:
A) will operate at the level of output associated with the kink in the demand curve.
B) will be protected from the economic effects of a recession.
C) has a perfectly elastic demand for its product.
D) has the incentive to cheat by cutting its price.

Ans: D Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237-238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

220. Other things being equal, a firm in a cartel will most likely cheat on a price-fixing agreement by:
A) increasing price and restricting its output.
B) organizing promotions of the product.
C) secretly increasing sales to a large number of small customers.
D) secretly lowering price and increasing sales to a few customers.

Ans: D Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237-238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

221. Other things being equal, cartels and similar collusive arrangements are easier to establish and maintain:
A) when there are ample opportunities for the firms to make secret price concessions to selected buyers.
B) during periods of cyclical stability and full employment.
C) when the demand and cost conditions of the participating firms differ substantially.
D) when the number of firms is relatively large.

Ans: B Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 237-238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

222. Informal collusion to restrict output and increase prices is sometimes referred to as a:
A) merger.
B) cartel.
C) tacit understanding
D) overt collusion model.

Ans: C Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Definition

223. Assume the several manufacturers of ceramic tile in a city reach a verbal agreement to establish the price of their product at 55 cents per tile. This best describes:
A) multiproduct pricing.
B) a cartel.
C) a tacit understanding.
D) price leadership.

Ans: C Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

224. Three major means of collusion by oligopolists are:
A) cartels, tacit understandings, and price leadership.
B) market sharing, mutual interdependence, and product differentiation.
C) cartels, product differentiation, and product differentiation.
D) tacit understandings, P = MC pricing, and mutual interdependence.

Ans: A Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

225. Which constitutes an obstacle to collusion among oligopolists?
A) a standardized product
B) a large number of firms
C) prosperous economic conditions
D) trademarks and copyrights

Ans: B Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

226. To be successful, collusion requires that oligopolists be able to:
A) increase prices to their highest level.
B) increase the ease of entry for new producers.
C) increase legal obstacles that protect market power.
D) keep the domestic economy from experiencing high inflation.

Ans: C Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 238 Subtopic: Cartels and other collusion: Cooperative strategies Type: Application

227. If a particular bank regularly announces changes in its interest rate schedules before its competitors, which then set rates very close to those announced by that bank, this could be described as:
A) markup pricing.
B) predatory pricing.
C) price leadership.
D) explicit price collusion.

Ans: C Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 239 Subtopic: Price leadership model: Another cooperative strategy Type: Application

228. Suppose firms in a collusive oligopoly decide to establish their prices at a level which discourages new rivals from entering the industry. This is called:
A) mutual interdependence.
B) "pricing the demand curve."
C) limit pricing.
D) price leadership.

Ans: C Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 239 Subtopic: Price leadership model: Another cooperative strategy Type: Definition

229. One of the leadership tactics used by a price leader in the price leadership model of collusive oligopoly is:
A) limit pricing.
B) frequently changing prices.
C) starting a price war with competitors.
D) trying to hide price changes from competitors

Ans: A Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 239 Subtopic: Price leadership model: Another cooperative strategy Type: Application

230. The strategy of establishing a price that prevents the entry of new firms is called:
A) a price war.
B) limit pricing.
C) price leadership.
D) setting a profit maximizing price.

Ans: B Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 239 Subtopic: Price leadership model: Another cooperative strategy Type: Definition

231. A break-down in price leadership leading to successive rounds of price cuts is known as:
A) limit pricing.
B) a price war.
C) tacit pricing
D) price discrimination

Ans: B Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 239 Subtopic: Price leadership model: Another cooperative strategy Type: Definition

232. Suppose that an industry is characterized by a few firms and price leadership. We would expect that:
A) price would equal marginal cost.
B) price would equal average total cost.
C) price would exceed both marginal cost and average total cost.
D) marginal revenue would exceed marginal cost.

Ans: C Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 239 Subtopic: Price leadership model: Another cooperative strategy Type: Application

233. In recent years advertising expenditures in Canada have been:
A) 10 to 12 percent of GDP per year.
B) $1 to $2 billion per year.
C) more than $6 billion per year.
D) about $300 billion per year.

Ans: C Level: Easy Main Topic: 9.6 Oligopoly and advertising Page: 240 Subtopic: Positive effects of advertising Type: Application

234. Advertising can enhance economic efficiency when it:
A) increases brand loyalty.
B) raises entry barriers.
C) increases consumer awareness of substitute products.
D) boosts average total cost.

Ans: C Level: Easy Main Topic: 9.6 Oligopoly and advertising Page: 240 Subtopic: Positive effects of advertising Type: Application

235. Advertising can enhance economic efficiency when it:
A) increases the cost of production.
B) expands sales such that firms achieve substantial economies of scale.
C) keeps new firms from entering profitable industries.
D) is undertaken by pure competitors.

Ans: B Level: Easy Main Topic: 9.6 Oligopoly and advertising Page: 240 Subtopic: Positive effects of advertising Type: Application

236. Why do oligopolists use product development and advertising?
A) They are less easily duplicated than price cuts as a competitive strategy.
B) They enhance the public good by providing information and new products.
C) They contribute to productive and allocative efficiency in markets.
D) They create conditions for mutual interdependence and support.

Ans: A Level: Moderate Main Topic: 9.6 Oligopoly and advertising Page: 240
Subtopic: Positive effects of advertising Type: Application

237. In competing with rivals, oligopolistic firms will tend to use:
A) price cuts because they do not add to costs like advertising.
B) advertising because it is less easily duplicated than price cuts.
C) collusion because it is a legal way to increase market share.
D) price wars because they will increase the profits of firms.

Ans: B Level: Easy Main Topic: 9.6 Oligopoly and advertising Page: 240
Subtopic: Positive effects of advertising Type: Application

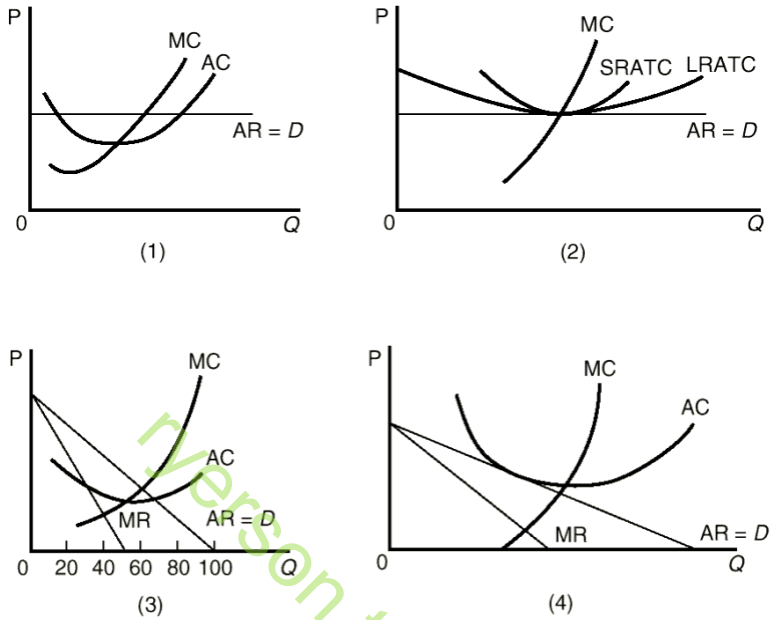
238. A positive effect of advertising for society is that it:
A) increases market share for the dominant firm in the industry.
B) provides useful information to reduce search cost for consumers.
C) raises barriers to entry into the industry and protects existing firms.
D) creates price leadership and gives firms guidance in dealing with rivals.

Ans: B Level: Easy Main Topic: 9.6 Oligopoly and advertising Page: 240
Subtopic: Positive effects of advertising Type: Application

239. What is a positive effect of advertising?
A) It reduces economic efficiency in the economy.
B) It promotes economic concentration in industry.
C) It is designed to persuade rather than inform consumers.
D) It provides information for reducing search costs.

Ans: D Level: Easy Main Topic: 9.6 Oligopoly and advertising Page: 240
Subtopic: Positive effects of advertising Type: Application

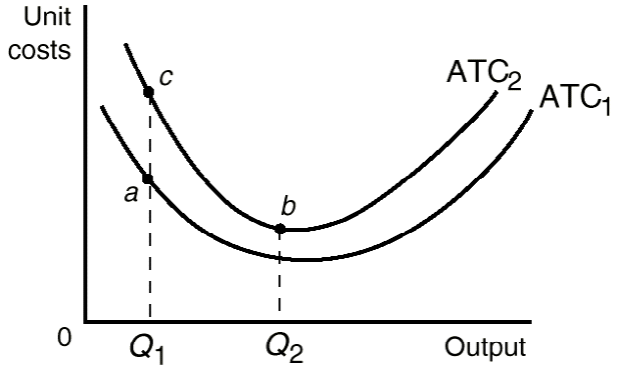
240. Which type of firms below would be expected to engage in advertising?



A) 1 and 2
B) 1 and 4
C) 2 and 3
D) 3 and 4 Main Topic: 9.6 Oligopoly and advertising Page: 240

Ans: D Level: Difficult
Subtopic: Positive effects of advertising Type: Graphic

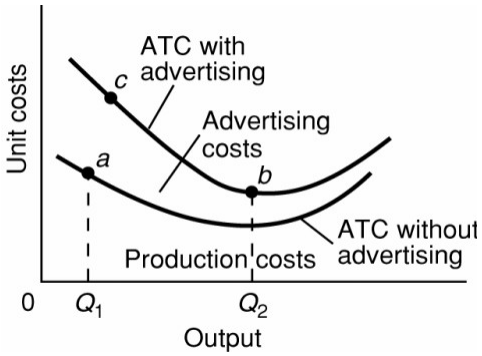
241. Refer to the below graph. Proponents of advertising claim it will:



A) lower costs from a to b and increase the level of output.
B) increase costs from ATC_1 to ATC_2 and decrease output levels for producers and consumers.
C) lower costs from ATC_2 to ATC_1, but leave output unchanged (e.g., moving from point c to point a at output level Q_1).
D) lower costs and increase output by moving a firm along its cost schedules, e.g., from point c to point b.

Ans: A Level: Difficult Main Topic: 9.6 Oligopoly and advertising Page: 240
Subtopic: Positive effects of advertising Type: Graphic

Use the following to answer questions 242-244:



242. The movement from point a to point b in the diagram above implies that:
A) the increased unit costs caused by advertising exceeds the decline in unit costs from the realization of scale economies.
B) advertising by various firms has been self-cancelling.
C) advertising has shifted the ATC curve downward.
D) the decline in unit costs from the realization of scale economies exceeds the increased unit costs caused by advertising.

Ans: D Level: Difficult Main Topic: 9.6 Oligopoly and advertising Page: 240
Subtopic: Positive effects of advertising Type: Graphic

243. In the diagram above, advertising is shown to be most conducive to economic efficiency in the movement from:
A) a to c.
B) a to b.
C) b to a.
D) c to a.

Ans: B Level: Difficult Main Topic: 9.6 Oligopoly and advertising Page: 240
Subtopic: Positive effects of advertising Type: Graphic

244. The movement from point a to point c in the diagram above implies that:
A) the increased unit costs caused by advertising exceeds the decline in unit costs from the realization of scale economies.
B) there are barriers to entry in this industry.
C) advertising has shifted the AC curve downward.
D) the decline in unit costs from the realization of scale economies exceeds the increased unit costs caused by advertising.

Ans: A Level: Difficult Main Topic: 9.6 Oligopoly and advertising Page: 240
Subtopic: Potential negative effects of advertising Type: Graphic

245. The presence of advertising in a particular market:
A) tells us that the industry is an oligopoly.
B) tells us that the industry is monopolistically competitive.
C) means that barriers to entering the industry are high.
D) may or may not mean substantial monopoly power in the industry.

Ans: D Level: Moderate Main Topic: 9.6 Oligopoly and advertising
Page: 240-241 Subtopic: Potential negative effects of advertising
Type: Application

246. Under oligopoly, if one firm in an industry significantly increases advertising expenditures in order to capture a greater market share, it is most likely that other firms in that industry will:
A) pursue a strategy to reduce advertising expenditures to maintain profits.
B) decide to increase advertising expenditures even if it means a reduction in profits.
C) make no changes in advertising expenditures because advertising is effective in the short run, but not the long run.
D) increase the price of the product to improve profits and then increase advertising expenditures.

Ans: B Level: Moderate Main Topic: 9.6 Oligopoly and advertising
Page: 240-241 Subtopic: Potential negative effects of advertising
Type: Application

247. Advertising can impede economic efficiency when it:
A) increases entry barriers.
B) reduces brand loyalty.
C) enables firms to achieve substantial economies of scale.
D) increases consumer awareness of substitute products.

Ans: A Level: Easy Main Topic: 9.6 Oligopoly and advertising
Page: 240-241 Subtopic: Potential negative effects of advertising
Type: Application

248. Advertising can impede economic efficiency when it:
A) reduces entry barriers.
B) reduces brand loyalty.
C) leads to greater monopoly power.
D) provides consumers with useful information about product quality.

Ans: C Level: Easy Main Topic: 9.6 Oligopoly and advertising
Page: 240-241 Subtopic: Potential negative effects of advertising
Type: Application

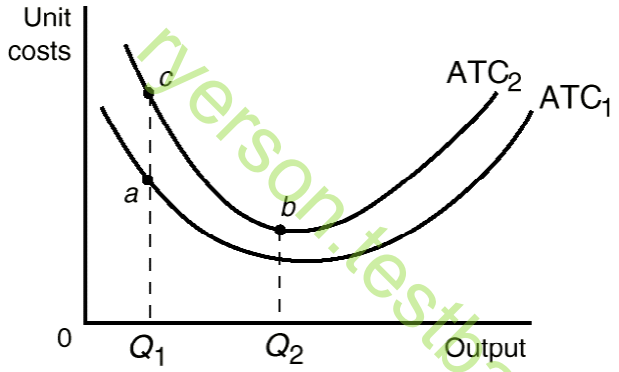
249. A potential negative effect of advertising for society is that it can:
A) be the major cause of price wars among firms in the industry.
B) reduce mutual interdependence and increase competition.
C) be self-cancelling and contribute to economic inefficiency.
D) lower barriers to entry and undermine profits in the industry.

Ans: C Level: Easy Main Topic: 9.6 Oligopoly and advertising
Page: 240-241 Subtopic: Potential negative effects of advertising
Type: Application

250. What is a potential negative effect of advertising?
A) It provides important information to consumers.
B) It promotes monopoly power in industry.
C) It contributes to allocative and productive efficiency.
D) It lowers search costs in product purchases.

Ans: B Level: Easy Main Topic: 9.6 Oligopoly and advertising
Page: 240-241 Subtopic: Potential negative effects of advertising
Type: Application

251. Refer to the below graph. Opponents of advertising contend that:



A) despite increasing output it increases costs, e.g., moving from point a to point b.
B) it has no effect on costs or output levels.
C) it raises costs without affecting output (e.g., moving from point a to point c) because competitor's ads are offsetting.
D) it offends many customers and thus raises costs and lowers output, e.g., from point b to point a.

Ans: C Level: Difficult Main Topic: 9.6 Oligopoly and advertising
Page: 240-241 Subtopic: Potential negative effects of advertising
Type: Graphic

252. Allocative and productive efficiency is achieved under the market structure of:
A) oligopoly.
B) perfect competition.
C) monopoly.
D) monopolistic competition.

Ans: B Level: Easy Main Topic: 9.6 Oligopoly and advertising
Page: 241-242 Subtopic: oligopoly and efficiency Type: Application

253. In an oligopolistic market there is likely to be:
A) little consideration of the actions of rival firms.
B) price taking behaviour on the part of firms.
C) homogeneous but not differentiated products.
D) neither allocative nor productive efficiency.

Ans: D Level: Moderate Main Topic: 9.6 Oligopoly and advertising
Page: 241-242 Subtopic: oligopoly and efficiency Type: Application

254. Which would describe how many economists would view efficiency in oligopoly?
A) P > MC and P = minimum ATC.
B) P = MC and P > minimum ATC.
C) P = MC and P = minimum ATC.
D) P > MC and P > minimum ATC.

Ans: D Level: Difficult Main Topic: 9.6 Oligopoly and advertising
Page: 241-242 Subtopic: oligopoly and efficiency Type: Formula

255. Which would be a qualification to the view that oligopoly is allocatively and productively inefficient?
A) Less foreign competition has stimulated more price competition in oligopolies.
B) Oligopolies are less technologically competitive so they lose market share.
C) Oligopolies may purposely keep prices below short-run profit-maximizing levels to bolster barriers to entry.
D) The more collusive practices of oligopolies lead to more profit-sharing among firms in the industry.

Ans: C Level: Moderate Main Topic: 9.6 Oligopoly and advertising
Page: 241-242 Subtopic: oligopoly and efficiency Type: Application

256. We would expect the oligopoly to achieve:
A) both allocative efficiency and productive efficiency.
B) allocative efficiency, but not productive efficiency.
C) productive efficiency, but not allocative efficiency.
D) neither allocative efficiency nor productive efficiency.

Ans: D Level: Moderate Main Topic: 9.6 Oligopoly and advertising
Page: 241-242 Subtopic: oligopoly and efficiency Type: Application

257. Suppose that a four-firm concentration ratio of 85 and a Herfindahl Index of 3000 characterize an industry. Most likely, this industry would achieve:
A) both productive efficiency and allocative efficiency.
B) allocative efficiency but not productive efficiency.
C) neither productive efficiency nor productive efficiency.
D) productive efficiency but not allocative efficiency.

Ans: C Level: Moderate Main Topic: 9.6 Oligopoly and advertising
Page: 241-242 Subtopic: oligopoly and efficiency Type: Application

258. The conclusion that oligopoly is inefficient relative to the competitive ideal must be qualified because:
A) industry price leaders often select a price equal to marginal cost.
B) over time oligopolistic industries may promote more rapid product development and greater improvement of production techniques than if they were perfectly competitive.
C) increased output due to persuasive advertising may perfectly offset the restriction of output caused by monopoly power.
D) many oligopolists sell their products in monopolistically competitive or even perfectly competitive industries.

Ans: B Level: Difficult Main Topic: 9.6 Oligopoly and advertising
Page: 241-242 Subtopic: oligopoly and efficiency Type: Application

259. The Canadian beer industry:
A) was formerly a monopolistically competitive industry, but is today more oligopolistic.
B) was made more competitive by technological advances such as faster bottling lines.
C) sells a growing proportion of its product for consumption in bars and taverns.
D) has experienced rapid growth in the number of independent brewers over the past forty years.

Ans: A Level: Easy Main Topic: The last word Page: 242-243
Type: Application

260. Which factor has most contributed to the increased concentration in the Canadian beer industry?
A) increased demand for strong beers
B) new technology for filling beer kegs
C) economies of scale in production
D) increased demand for soft drinks

Ans: C Level: Easy Main Topic: Last Word; The last word Page: 242-243
Type: Application

261. Monopolistic competitors have some control over the price of their products.

Ans: True Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition Page: 220 Type: Application

262. Brand names and packaging are forms of product differentiation under monopolistic competition.

Ans: True Level: Easy Main Topic: 9.1 Characteristics of monopolistic competition Page: 220 Type: Application

263. The demand curve of a monopolistically competitive producer is less elastic than that of a perfectly competitive producer.

Ans: True Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Type: Application

264. The demand curve of a monopolistically competitive firm is more elastic than that of a monopolist.

Ans: True Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Type: Application

265. The larger the number of firms and the less pronounced the degree of product differentiation, the greater will be the elasticity of a monopolistically competitive seller's demand curve.

Ans: True Level: Difficult Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Type: Definition

266. In the long run, typical firms that are monopolistically competitive earn economic profits.

Ans: False Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Type: Application

267. In the long run monopolistically competitive firms make normal profits because they are forced to operate at the minimum point on their average total cost curve.

Ans: False Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Type: Application

268. The monopolistically competitive seller maximizes profits by equating price and marginal cost.

Ans: False Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Type: Application

269. The monopolistically competitive seller equates price and marginal cost in maximizing profits.

Ans: False Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Type: Application

270. Monopolistically competitive sellers realize economic profits in the long run because entry barriers are significant.

Ans: False Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Type: Application

271. The economic profits earned by monopolistically competitive sellers are zero in the long run.

Ans: True Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 223-224 Type: Application

272. Monopolistically competitive sellers produce efficiently because they realize only normal profits in the long run.

Ans: False Level: Easy Main Topic: 9.2 Price and output in monopolistic competition Page: 225-226 Type: Application

273. Monopolistically competitive firms are inefficient because they produce at a point on the rising segment of their average cost curve.

Ans: False Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 225-226 Type: Application

274. The "excess capacity" problem associated with monopolistic competition implies that fewer firms could produce the same industry output at a lower total cost.

Ans: True Level: Moderate Main Topic: 9.2 Price and output in monopolistic competition Page: 226 Type: Application

275. Generally speaking, oligopolistic industries producing raw materials and semi-finished goods usually offer differentiated products, while oligopolists producing consumer goods usually offer standardized products.

Ans: False Level: Moderate Main Topic: 9.3 Oligopoly Page: 228
Type: Application

276. Mutual interdependence means that oligopolistic producers rely on price competition in determining their shares of the total market for their product.

Ans: False Level: Easy Main Topic: 9.3 Oligopoly Page: 228
Type: Definition

277. Concentration ratios include adjustments for foreign competition in measuring concentration in an industry.

Ans: False Level: Easy Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 230 Type: Application

278. Game theory analysis of oligopolist behaviour suggests that oligopolists will benefit from collusion.

Ans: True Level: Easy Main Topic: 9.4 Oligopoly pricing behaviour: A game theory overview Page: 231 Type: Application

279. If three or four homogeneous oligopolists collude, the resulting price and production outcomes will be similar to those of monopoly.

Ans: True Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 235-236 Type: Application

280. Generally speaking, the larger the number of firms in an oligopolistic industry, the more difficult it is for those firms to behave collusively.

Ans: True Level: Moderate Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 235-236 Type: Application

281. The most comprehensive form of collusion is the cartel.

Ans: True Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 235-236 Type: Definition

282. The price leadership is a type of implicit understanding by which oligopolists can coordinate prices.

Ans: True Level: Easy Main Topic: 9.5 The incentives and obstacles to collusion: Two oligopoly strategies Page: 239 Type: Definition

283. Oligopolists do not have sufficient financial resources to engage in product development and advertising.

Ans: False Level: Easy Main Topic: 9.6 Oligopoly and advertising Page: 240 Type: Application

284. Advertisings have both positive and negative effects.

Ans: True Level: Easy Main Topic: 9.6 Oligopoly and advertising Page: 240 Type: Application

285. Oligopolies are neither allocatively nor productively efficient when compared with the standard set in perfect competition.

Ans: True Level: Moderate Main Topic: 9.6 Oligopoly and advertising Page: 241-242 Type: Application

286. Dominant strategy in game theory is:
A) an option in which both firms want to deviate from it.
B) an option in which the parties make their move in turn .
C) an option which is inferior to any other option considering what the other firm does.
D) an option that is better than any alternative option regardless of what the other firm does.

Ans: D Level: Moderate Main Topic: Appendix to Chapter 9 Page: 247 Subtopic: A one-time game: Strategies and equilibrium Type: Definition

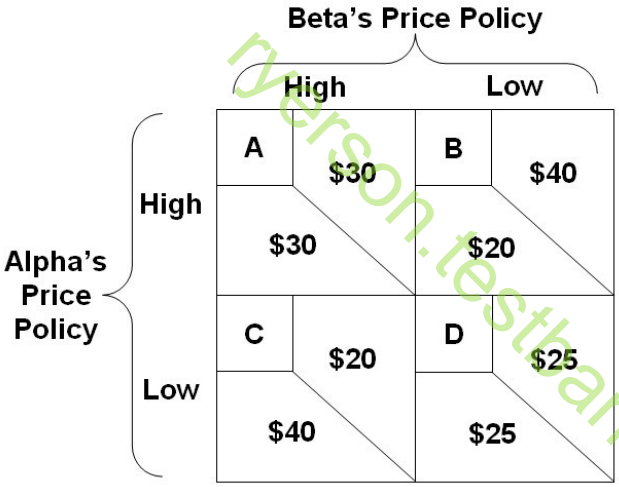
287. A simultaneous game is said to exist when:
A) Firms are playing pricing games in different markets at the same time.
B) firms choose their strategies at the same time as their rivals .
C) firms can set multiple prices for the same good at the same time.
D) strategies are set without regard to possible interactions in future time periods.

Ans: B Level: Easy Main Topic: Appendix to Chapter 9 Page: 247 Subtopic: A one-time game: Strategies and equilibrium Type: Definition

288. A positive-sum game occurs:
A) when the sum of the two firms' outcomes is positive.
B) whenever any of the values in the payoff matrix are positive .
C) when the gains received by one player are exactly offset by the losses to the other.
D) whenever the payoffs to the two players are equal.

Ans: A Level: Moderate Main Topic: Appendix to Chapter 9 Page: 247
Subtopic: A one-time game: Strategies and equilibrium Type: Definition

Use the following to answer questions 289-294:



289. The payoff matrix above represents:
A) a zero-sum game.
B) a negative-sum game .
C) a positive-sum game.
D) a game that can only be played in a single time period.

Ans: C Level: Easy Main Topic: Appendix to Chapter 9 Page: 247
Subtopic: A one-time game: Strategies and equilibrium Type: Application

290. In the payoff matrix above :
A) both firms have a dominant strategy.
B) neither firm has a dominant strategy .
C) Alpha has a dominant strategy but Beta does not.
D) Beta has a dominant strategy but Alpha does not.

Ans: A Level: Moderate Main Topic: Appendix to Chapter 9 Page: 247
Subtopic: A one-time game: Strategies and equilibrium Type: Application

291. In the payoff matrix shown above :
A) neither firm has a dominant strategy.
B) both firms have a dominant strategy to price high.
C) both firms have a dominant strategy to price low.
D) one firm has a dominant strategy to price high, the other to price low.

Ans: C Level: Moderate Main Topic: Appendix to Chapter 9 Page: 247
Subtopic: A one-time game: Strategies and equilibrium Type: Application

292. Refer to the above payoff matrix. Which cell represents the outcome of this game?
A) A.
B) B.
C) C.
D) D. Main Topic: Appendix to Chapter 9 Page: 247

Ans: D Level: Moderate
Subtopic: A one-time game: Strategies and equilibrium Type: Application

293. Refer to the above matrix. Suppose that Alpha and Beta agree that they will both pursue a high price strategy. If Beta then cheats on the agreement in order to increase profits, which of the following is true?
A) if this is a repeated game, Alpha can be expected to pursue a low price strategy in future games.
B) if this is a one-time game, a Nash equilibrium will result.
C) a Nash equilibrium cannot be reached through repeated playing of this game.
D) the game is a negative sum-game.

Ans: A Level: Moderate Main Topic: Appendix to Chapter 9 Page: 247-248
Subtopic: A one-time game: Strategies and equilibrium Type: Application

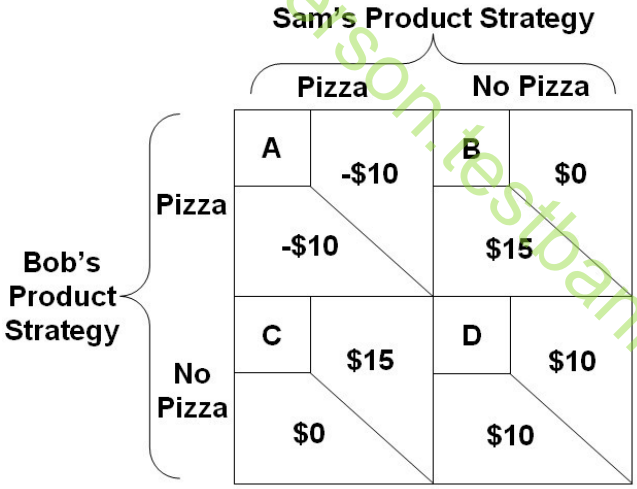
294. Refer to the above payoff matrix. Which of the following statements is true regarding the outcome of this game?
A) both firms will price high, and this outcome is a Nash equilibrium.
B) both firms will price low, and this outcome is a Nash equilibrium.
C) both firms will price high, but this outcome is not a Nash equilibrium.
D) both firms will price low, but this outcome is not a Nash equilibrium.

Ans: B Level: Moderate Main Topic: Appendix to Chapter 9 Page: 248
Subtopic: A one-time game: Strategies and equilibrium Type: Application

295. In Nash equilibrium:
   A) one rival see its current strategy as optimal given the other firm's strategic choice.
   B) both rivals see their current strategy as optimal given the other firm's strategic choice.
   C) none of the rivals see their current strategy as optimal given the other firm's strategic choice.
   D) the outcome regarding strategies of two firms is not stable and therefore not lasting.

   Ans: B Level: Moderate Main Topic: Appendix to Chapter 9 Page: 248
   Subtopic: A one-time game: Strategies and equilibrium Type: Definition

Use the following to answer question 296:



296. Refer to the above payoff matrix. Bob's burger and Sam's Sandwiches are competing restaurants in a small town. Both are considering adding pizza to their line of products. If this is a sequential game but we don't know who moves first, what can we say about the final outcome?
   A) there is Nash equilibrium attainable for this game.
   B) Cell A represents the only Nash equilibrium possible for this game.
   C) Cell D represents the only Nash equilibrium possible for this game.
   D) Cells B and C both represent possible Nash equilibrium for this game.

   Ans: D Level: Moderate Main Topic: Appendix to Chapter 9 Page: 248
   Subtopic: A one-time game: Strategies and equilibrium Type: Application

297. Which of the following best describes a Nash equilibrium?
A) an outcome from which one or both competitors can improve their position by adopting an alternative strategy.
B) the unstable outcome of a repeated game.
C) an outcome that is table onlt because of credible threats.
D) an outcome which both competitors see as optimal, given the strategy of their rivals.

Ans: D Level: Moderate Main Topic: Appendix to Chapter 9 Page: 248
Subtopic: Credible and empty threats Type: Definition

298. Collusive agreements between two firms are most likely to be honoured when the game:
A) is a one-time game with the opportunity for a prisoner's dilemma.
B) has a Nash equilibrium that differs from the outcome that maximizes the payoffs to the two firms.
C) is a zero-sum game.
D) is repeated and both firms offer credible threats if the other violates the agreement.

Ans: D Level: Moderate Main Topic: Appendix to Chapter 9 Page: 248
Subtopic: Credible and empty threats Type: Definition

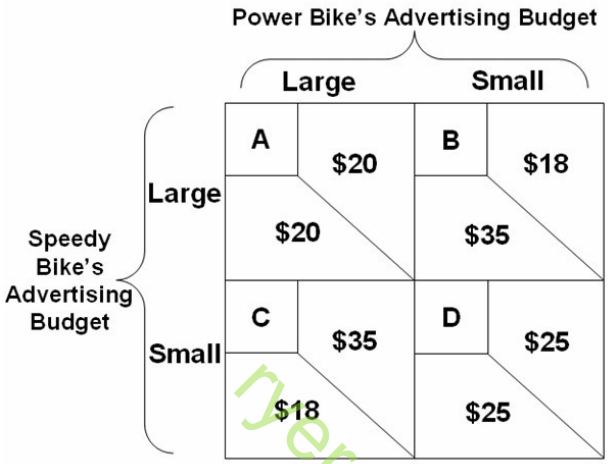
299. Credible threat is:
A) the outcome of a new entry into the oligopolistic industry.
B) a statement of harmful intent which should not be taken seriously.
C) a statement of harmful intent by one party that the other party views as believable.
D) a statement of harmful intent by one party that the other party does not take seriously.

Ans: C Level: Easy Main Topic: Appendix to Chapter 9 Page: 248
Subtopic: Credible and empty threats Type: Definition

300. In a repeated game:
A) both firms engage in competing strategies.
B) the optimal strategy is to always move first before your rival gets the chance.
C) only one firm repeatedly comes up with a new strategy.
D) the optimal strategy is to cooperate and restrain from competing so long as the other firm reciprocates by also not competing.

Ans: D Level: Easy Main Topic: Appendix to Chapter 9 Page: 248-249
Subtopic: Repeated games and reciprocity strategies Type: Definition

Use the following to answer question 301:



301. Refer to the above payoff matrix. Suppose that Speedy Bike and Power Bike are the only two bicycle manufacturing firms serving the market. Both can choose large and small advertising budgets. If this is a repeated game with no cooperation or reciprocity, which cell represents the final outcome we would expect to occur?
A) A.
B) B.
C) C.
D) D.

Ans: A Level: Easy Main Topic: Appendix to Chapter 9 Page: 248-249
Subtopic: Repeated games and reciprocity strategies Type: Application

302. Sequential game is:
A) the game in which the parties make their moves in turn.
B) the game in which the parties make their move simultaneously.
C) the game in which only one of the firms make the move over and over again.
D) the game in which each party makes its move regardless of how the other firm reacts.

Ans: C Level: Easy Main Topic: Appendix to Chapter 9 Page: 249-250
Subtopic: First-mover advantages and pre-emption of entry Type: Definition

303. In a sequential game with two firms, the first mover into a new market:
A) is guaranteed positive economic profits.
B) is assured of blocking any potential second mover from entering the market.
C) runs the risk that the untested new market will not provide enough customers.
D) will likely set a high price to reap greater profits until the second mover enters.

Ans: C Level: Easy Main Topic: Appendix to Chapter 9 Page: 249-250
Subtopic: First-mover advantages and pre-emption of entry Type: Application

304. A positive sum game is defined as a game where neither player can receive a negative payoff.

Ans: False Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 247
Type: Definition

305. Negative-sum games do not exist because neither player has an incentive to play the game.

Ans: False Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 247
Type: Definition

306. In a zero-sum game, the gains by one player will be exactly offset by the losses of the other.

Ans: True Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 247
Type: Definition

307. If one player in game has a dominant strategy, the other player must also have a dominant strategy.

Ans: False Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 247
Type: Definition

308. A player is said to have a dominant strategy when one of the options available is superior, regardless of what strategy the other player chooses.

Ans: True Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 247
Type: Definition

309. If neither player has an incentive to deviate from the outcome of a game, the outcome is a Nash equilibrium.

Ans: True Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 248
Type: Definition

310. A Nash equilibrium can only occur in repeated games.

Ans: False Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 248
Type: Application

311. Repeated games may involve either simultaneous or sequential decision-making.

Ans: True Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 248
Type: Application

312. In repeated games, players may be willing to accept lower payoffs in the short run in exchange for greater net payoffs over the long run.

Ans: True Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 248
Type: Application

313. One characteristic of sequential games is that they all have first-mover advantages.

Ans: False Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 249
Type: Application

314. The first mover in a sequential game always has the advantage over the second.

Ans: False Level: Easy Main Topic: 9.5 Appendix to Chapter 9 Page: 249-250
Type: Application

CHAPTER 10

Competition Policy and Regulation

1. Industrial concentration is said to exist whenever:
   A) firms in an industry receive above-normal profits in the short run.
   B) a single firm or a small number of firms control all, or a major portion of, the output of a particular industry.
   C) a unique product is produced by a single firm.
   D) the product price in an industry exceeds marginal cost in the long run.

   Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: The competition policy Type: Definition

2. One defence of industrial concentration is the contention that:
   A) large market shares and high profits result from superior products.
   B) monopolies and oligopolies often pay higher than market wage rates.
   C) monopolists and oligopolists can force resource suppliers to supply inputs at lower-than-competitive prices.
   D) the prices that monopolists and oligopolists charge tend to equal average cost in the long run.

   Ans: A Level: Moderate Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: The competition policy Type: Application

3. Industrial concentration:
   A) may understate the degree of competition because of inter-industry competition, foreign competition, and potential competition.
   B) has resulted entirely from economies of scale.
   C) has made the distribution of income less unequal.
   D) has largely eliminated economic profits.

   Ans: A Level: Moderate Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: The competition policy Type: Application

4. The main purpose of the competition policy is:
   A) to encourage firms to produce where P > MC.
   B) the elimination of both negative and positive externalities.
   C) to prevent the monopolization of industries.
   D) to regulate natural monopolies.

   Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: The competition policy Type: Application

5. Which is generally considered to be true of large business firms having monopoly power?
   A) Society's resources are allocated more efficiently with such firms than with small firms.
   B) The existence of such firms leads to a more equal distribution of income.
   C) Such firms often experience substantial economies of scale where existing technology is highly advanced.
   D) By supporting lobbyists and politicians with many different viewpoints, such firms make possible a wider diffusion of political power.

   Ans: C Level: Moderate Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: The competition policy Type: Application

6. The market system often does not function competitively because:
   A) market failures arise from the production of public goods.
   B) a few large firms dominate major industries.
   C) technological advance is limited.
   D) capital accumulation is slow.

   Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: The competition policy Type: Application

7. The major problem with an unregulated monopoly is that the monopolist will produce:
   A) less output and sell at a higher price than would be the case in pure competition.
   B) more output and sell at a higher price than would be the case in pure competition.
   C) more output and sell at a lower price than would be the case in pure competition.
   D) less output and sell at a lower price than would be the case in pure competition.

   Ans: A Level: Moderate Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: The competition policy Type: Application

8. The merger of a manufacturing firm in one industry with another manufacturing firm in the same industry is called a:
   A) horizontal merger.
   B) vertical merger.
   C) secondary merger.
   D) conglomerate merger.

   Ans: A Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: Merger types Type: Definition

9. The merger of a firm in one industry with a firm in the same industry that sells similar products is called a:
   A) vertical merger.
   B) secondary merger.
   C) horizontal merger.
   D) conglomerate merger.

   Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: Merger types Type: Definition

10. A merger between McDonald's and Burger King would be an example of a:
   A) conglomerate merger.
   B) horizontal merger.
   C) vertical merger.
   D) parallel merger.

   Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: Merger types Type: Application

11. An example of a horizontal merger is one between an airline and:
   A) a chain of hotels.
   B) another airline.
   C) an aluminum company.
   D) a car rental company.

   Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: Merger types Type: Application

12. A vertical merger involves a combining of one or more firms:
   A) as the result of one firm purchasing the assets of the other.
   B) that are operating in entirely different industries.
   C) operating at different stages of the production process in a given industry.
   D) operating at the same stage of the production process.

   Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
   Subtopic: Merger types Type: Definition

13. A merger between an automobile manufacturer and a maker of automobile tires is an example of a:
    A) conglomerate merger.
    B) horizontal merger.
    C) vertical merger.
    D) tying contract.

    Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Application

14. Refer to the table below. A merger between Firms 2 and 3 in Alpha would be a:

    The following table shows market shares of firms in hypothetical industries. Assume these distinct industries with no buyer-seller relationships or competition among them.

    Marketshareoffirmsinindustry

Industry	1	2	3	4	5	6
Alpha	30	30	20	20	--	--
Beta	80	10	5	3	1	1
Cappa	25	25	25	25	--	--
Delta	20	20	20	20	10	10

    A) vertical merger.
    B) horizontal merger.
    C) diagonal merger.
    D) conglomerate merger.

    Ans: B Level: Moderate Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Application

15. A merger between one firm and another firm that is its supplier is known as a:
    A) horizontal merger.
    B) parallel merger.
    C) conglomerate merger.
    D) vertical merger.

    Ans: D Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Definition

16. If Tyson Corporation, a firm that grows and processes chickens, combines with Kentucky Fried Chicken, the resulting merger would be an example of a:
    A) horizontal merger.
    B) geographic merger.
    C) vertical merger.
    D) conglomerate merger.

    Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Application

17. "Vertical integration" refers to mergers between firms:
    A) making unrelated types of products.
    B) at the same stage of production of the same end product.
    C) at the same stage of production of different end products.
    D) at different stages of production of the same end product.

    Ans: D Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Definition

18. Conglomerate mergers are combinations of:
    A) many small firms.
    B) firms producing the same product.
    C) firms producing unrelated products.
    D) firms operating at different stages in a given production process.

    Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Definition

19. When one firm acquires another firm engaged in a different industry, this is known as a:
    A) vertical merger.
    B) conglomerate merger.
    C) horizontal merger.
    D) violation of the law.

    Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Definition

20. Conglomerate mergers are combinations of:
    A) many small firms.
    B) firms producing the same product.
    C) firms producing unrelated products.
    D) firms operating at different stages in a given production process.

    Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Definition

21. One of the main causes of industrial concentration is:
    A) to reduce the concentration ratio.
    B) merger of the firms.
    C) to create more competition.
    D) to prevent monopoly power.

    Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Definition

22. A merger of several firms operating in different industries--for example, a trucking company, a fast-food chain, and a brokerage house--is called:
    A) an integrated merger.
    B) a conglomerate merger.
    C) a vertical merger.
    D) a horizontal merger.

    Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Definition

23. A merger between a maker of household detergents and a fast food chain would be an example of:
    A) a horizontal merger.
    B) an interlocking directorate.
    C) a conglomerate merger.
    D) a tying contract.

    Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Subtopic: Merger types Type: Application

24. Refer to the table below. A merger between Firm 1 in Alpha and Firm 2 in Delta would be a:

The following table shows market shares of firms in hypothetical industries. Assume these distinct industries with no buyer-seller relationships or competition among them.

Marketshareoffirmsinindustry

Industry	1	2	3	4	5	6
Alpha	30	30	20	20	--	--
Beta	80	10	5	3	1	1
Cappa	25	25	25	25	--	--
Delta	20	20	20	20	10	10

A) vertical merger.
B) horizontal merger.
C) conglomerate merger.
D) diagonal merger.

Ans: C Level: Moderate Main Topic: 10.1 Industrial concentration Page: 254
Subtopic: Merger types Type: Application

25. The basic purpose of competition law is to:
A) achieve subsidies for American business.
B) limit monopoly power in industry.
C) control prices to protect consumers.
D) enforce laws that restrict competition.

Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 255
Subtopic: The competition law Type: Definition

26. Which type of merger is most likely to be the focus of competition law scrutiny and enforcement?
A) conglomerate
B) horizontal
C) vertical
D) natural

Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 255
Subtopic: The competition law Type: Application

27. Which has tended to reduce the importance of competition law?
    A) industrial policy
    B) the break-up of Bell Canada
    C) the rule of reason decision
    D) global competition in markets

    Ans: D Level: Easy Main Topic: 10.1 Industrial concentration Page: 255
    Subtopic: The competition law Type: Calculation

28. Laws and government actions designed to prevent monopoly and promote competition are the focus of:
    A) social regulation.
    B) industrial regulation.
    C) competition policy.
    D) incomes policy.

    Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 255
    Subtopic: The competition law Type: Definition

29. Patent laws are controversial because:
    A) they are in legal conflict with the provisions of competition law.
    B) they are at the core of the problem of whether monopoly is based upon industry structure or behaviour.
    C) while patents encourage innovation, they are also a source of monopoly power.
    D) any firm whose monopoly power is based upon patents is automatically exempt from the competition policy.

    Ans: C Level: Moderate Main Topic: 10.1 Industrial concentration Page: 255
    Subtopic: The competition law Type: Application

30. The price fixing charges in Canada are handled under:
    A) civil law.
    B) criminal law.
    C) business law.
    D) combination of civil law and business law.

    Ans: B Level: Easy Main Topic: 10.1 Industrial concentration Page: 255
    Subtopic: The competition law Type: Application

31. In 1999, Canadian government allowed Air Canada to acquire Canadian Airlines. One of the main reasons for this permission was that:
    A) Air Canada had a better international recognition.
    B) a horizontal merger is usually allowed if one of the merging firms is suffering major continuing losses.
    C) it was a vertical merger and these mergers are allowed in Canada.
    D) Canadian Airline was enjoying a high profit while Air Canada was experiencing huge losses.

    Ans: B Level: Moderate Main Topic: 10.1 Industrial concentration Page: 255
    Subtopic: Merger guidelines Type: Application

32. A tying contract is:
    A) a requirement for buyer and seller to involve a third party in the transaction.
    B) a requirement for the merger of buyer and seller.
    C) a requirement imposed by a seller that a buyer purchase another of its products as a condition for buying a desired product.
    D) a requirement imposed by a seller that a buyer purchase all of its products as a condition for buying a desired product.

    Ans: C Level: Moderate Main Topic: 10.1 Industrial concentration Page: 255
    Subtopic: Merger guidelines Type: Definition

33. Price discrimination is a common business practice and is rarely challenged by the Competition Tribunal. The exception to this occurs when:
    A) a horizontal merger takes place.
    B) a vertical merger takes place.
    C) market power is weak.
    D) a firm engages in price discrimination as part of a strategy to block entry or drive out competitors.

    Ans: D Level: Moderate Main Topic: 10.1 Industrial concentration Page: 255
    Subtopic: Merger guidelines Type: Application

34. The federal government has established a guideline regarding mergers. According to this guideline:
    A) conglomerate mergers are not permitted since such mergers increases the market shares.
    B) horizontal mergers are allowed since such mergers do not increase the market shares.
    C) conglomerate mergers are generally permitted while horizontal mergers are not.
    D) only vertical mergers are permitted.

    Ans: C Level: Easy Main Topic: 10.1 Industrial concentration Page: 255
    Subtopic: Merger guidelines Type: Application

35. Which of the following is most likely to be in conflict with strict enforcement of competition policy?
    A) promoting exports
    B) reducing poverty
    C) reducing farm surpluses
    D) reducing inflation

    Ans: A Level: Easy Main Topic: 10.1 Industrial concentration Page: 256-257
    Subtopic: Merger guidelines Type: Application

36. The enforcement of competition laws is more difficult and subject to controversy in case of:
    A) agriculture industry.
    B) oil industry.
    C) food industry.
    D) computer and communication industry.

    Ans: D Level: Easy Main Topic: 10.1 Industrial concentration Page: 256-257
    Subtopic: Merger guidelines Type: Application

37. A firm is likely to be a natural monopoly:
    A) when the demand for its product or service is inelastic.
    B) if it is producing an inferior good.
    C) if economies of scale are experienced over the full range of output.
    D) because government grants it an exclusive franchise.

    Ans: C Level: Easy Main Topic: 10.2 Industrial regulation Page: 257
    Subtopic: Natural monopoly Type: Definition

38. The condition where a single firm can supply an entire market at a lower unit cost than could a number of competing firms defines a:
    A) dominant firm oligopoly.
    B) natural monopoly.
    C) structured market.
    D) trust.

    Ans: B Level: Easy Main Topic: 10.2 Industrial regulation Page: 257
    Subtopic: Natural monopoly Type: Definition

39. If economies of scale in an industry are so extensive that a single firm can supply the entire market at lower unit cost than could a number of competing firms, this industry is called a(n):
    A) conglomerate.
    B) natural monopoly.
    C) oligopoly.
    D) restraint of trade.

    Ans: B Level: Easy Main Topic: 10.2 Industrial regulation Page: 257
    Subtopic: Natural monopoly Type: Definition

40. Generally speaking, if a firm faces decreasing average total costs of production throughout its range of output, then:
    A) more firms will enter the market.
    B) it will be unable to remain in business.
    C) the firm is a natural monopoly.
    D) the firm is able to earn only a normal profit.

    Ans: C Level: Easy Main Topic: 10.2 Industrial regulation Page: 257
    Subtopic: Natural monopoly Type: Definition

41. A market in which a single seller is required for efficient production is called a(n):
    A) regulated industry.
    B) natural monopoly.
    C) oligopoly.
    D) competitive market.

    Ans: B Level: Easy Main Topic: 10.2 Industrial regulation Page: 257
    Subtopic: Natural monopoly Type: Definition

42. What is a major characteristic of a natural monopoly?
    A) the firm is a single seller of a resource.
    B) its sets price equal to marginal revenue.
    C) there is extensive product advertising.
    D) there is a large range for economies of scale.

    Ans: D Level: Moderate Main Topic: 10.2 Industrial regulation Page: 257
    Subtopic: Natural monopoly Type: Application

43. Which is most likely to be a natural monopoly?
    A) aircraft manufacturing
    B) auto production
    C) electricity company
    D) steel companies

    Ans: C Level: Easy Main Topic: 10.2 Industrial regulation Page: 257
    Subtopic: Natural monopoly Type: Application

44. What is most likely to happen as the output of a natural monopoly increases over the range of market demand?
    A) there is a small decrease in average total cost and then it increases as output increases.
    B) there is an increase in average total cost and then it decreases as output increases.
    C) average total cost increases as output increases.
    D) average total cost decreases as output increases.

    Ans: D Level: Moderate Main Topic: 10.2 Industrial regulation Page: 257
    Subtopic: Natural monopoly Type: Application

45. Legislation designed to regulate natural monopolies would be based on which theory of regulation?
    A) social theory of regulation.
    B) legal cartel.
    C) public interest theory of regulation.
    D) price fixing.

    Ans: C Level: Easy Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Natural monopoly Type: Application

46. The public interest theory of regulation:
    A) says that industries should be regulated to insure quality service at reasonable prices.
    B) says higher costs may not be passed through to consumers.
    C) protects industries from new competition.
    D) guarantees higher rates for natural monopolies.

    Ans: A Level: Easy Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Natural monopoly Type: Definition

47. The theory of regulation designed to deal with "natural monopolies" is called:
    A) legal cartel theory.
    B) public interest theory.
    C) potential competition theory.
    D) social regulation theory.

    Ans: B Level: Moderate Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Natural monopoly Type: Definition

48. The effectiveness of regulation is sometimes criticized because:
    A) regulators try to please everybody.
    B) of the high profits in regulated industries.
    C) regulators don't know how to regulate industries.
    D) regulators usually have been associated with the industries they regulate.

    Ans: D Level: Easy Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Problems with industrial regulation Type: Application

49. Industrial policy comprises:
    A) anti-combines, industrial regulation, and social regulation.
    B) industrial regulation and social regulation only.
    C) government actions promoting the economic growth of key industries or firms.
    D) attempts by natural monopolists to restrict output and raise price.

    Ans: C Level: Moderate Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Problems with industrial regulation Type: Definition

50. Which of the following statements best describes the concept of an industrial policy?
    A) use low-interest loans, loan guarantees, special tax treatment, and foreign trade protection to strengthen certain Canadian industries.
    B) concentrate on anti-combines enforcement and free-trade to strengthen competition.
    C) provide tuition and living expense allowances to students for vocational and college education.
    D) leave the development of high-tech industries to Germany and Japan and concentrate on service industries in Canada.

    Ans: A Level: Moderate Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Problems with industrial regulation Type: Definition

51. Industrial policy:
    A) applies to nearly all firms in the economy while industrial regulation applies to only a few.
    B) is generally opposed by the affected firms while industrial regulation is usually welcomed.
    C) promotes profitability of selected industries or firms while industrial regulation generally reduces the firms' revenues or increases their costs.
    D) has lost favour the past two decades while industrial regulation has been expanded to several new industries.

    Ans: C Level: Moderate Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Problems with industrial regulation Type: Application

52. Government's announced participation with General Motors, Ford, and Chrysler to develop a highly fuel-efficient gasoline engine is an example of:
    A) social regulation.
    B) competition policy.
    C) industrial regulation.
    D) industrial policy.

    Ans: D Level: Easy Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Problems with industrial regulation Type: Application

53. The principal objective of industrial regulation is to:
    A) increase product safety.
    B) promote improvements in the quality of life.
    C) protect the public from the market power of natural monopolies.
    D) solve problems associated with industry such as the problems of water and air pollution.

    Ans: C Level: Easy Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Problems with industrial regulation Type: Application

54. Which of the following is the most valid criticism of the regulation of natural monopolies and other firms subject to regulation by regulatory commissions?
    A) it is difficult to find enough honest people to serve on regulatory commissions.
    B) such regulation is unnecessary and amounts to creeping socialism.
    C) many members of such commissions are appointed rather than being elected.
    D) regulated firms may have little incentive to contain costs since they are assured a "fair" return above costs.

    Ans: D Level: Moderate Main Topic: 10.2 Industrial regulation Page: 258
    Subtopic: Problems with industrial regulation Type: Application

55. Regulation of business, according to the legal cartel theory, stems from:
    A) the public wanting protection from potentially capricious firms.
    B) economists who see greater efficiency in regulated industries.
    C) lawyers whose jobs are more secure in cartels.
    D) firms wanting to be regulated.

    Ans: D Level: Easy Main Topic: 10.2 Industrial regulation Page: 259
    Subtopic: Legal cartel theory Type: Application

56. Supporters of deregulation of previously regulated industries argued that it would result in:
    A) increased monopoly power.
    B) lower rates of innovation.
    C) increased bureaucratic control.
    D) decreased prices of goods and services.

    Ans: D Level: Easy Main Topic: 10.2 Industrial regulation Page: 259
    Subtopic: Deregulation Type: Application

57. Critics of the deregulation of industry argued that (among other things) deregulation would lead to:
    A) higher prices for industry products.
    B) more competition among firms in an industry.
    C) more output produced by the industry.
    D) a decline in bureaucratic inefficiencies in that industry.

    Ans: D Level: Moderate Main Topic: 10.2 Industrial regulation Page: 259
    Subtopic: Deregulation Type: Application

58. Government regulation concerning the conditions under which goods are produced and the physical characteristics of goods is known as:
    A) industrial regulation.
    B) social regulation.
    C) economic regulation.
    D) competition policy regulation.

    Ans: B Level: Easy Main Topic: 10.3 Social regulation Page: 260
    Subtopic: Distinguishing features Type: Definition

59. Social regulation:
    A) was developed as a substitute for industrial regulation.
    B) has declined in importance in recent years.
    C) applies more broadly and affects more people than industrial regulation.
    D) is more concerned with the overall standard of living of society rather than with details of production processes.

    Ans: C Level: Moderate Main Topic: 10.3 Social regulation Page: 260
    Subtopic: Distinguishing features Type: Application

60. The Occupational Safety and Health Administration is an example of:
    A) industrial regulation.
    B) social regulation.
    C) competition policy regulation.
    D) public utility regulation.

    Ans: B Level: Easy Main Topic: 10.3 Social regulation Page: 260
    Subtopic: Distinguishing features Type: Application

61. Which is a primary concern of social regulation?
    A) price fixing
    B) per se violation
    C) product design
    D) industry profits

    Ans: C Level: Easy Main Topic: 10.3 Social regulation Page: 260
    Subtopic: Distinguishing features Type: Application

62. Social regulation differs from industrial regulation:
    A) in that social regulation applies to virtually all industries, while industrial regulation applies to a restricted number.
    B) in that social regulation is involved in the details of the production process, while industrial regulation is not.
    C) in that social regulation has expanded more rapidly in recent years than has industrial regulation.
    D) in all of the above ways.

    Ans: D Level: Moderate Main Topic: 10.3 Social regulation Page: 260
    Subtopic: Distinguishing features Type: Application

63. A major difference between industrial regulation and social regulation is that industrial regulation:
    A) covers many industries across the economy.
    B) has expanded rapidly since the 1970s.
    C) is targeted at the prices charged, the costs of production, and amount of profit.
    D) focuses on product design, employment conditions, and the production process.

    Ans: C Level: Moderate Main Topic: 10.3 Social regulation Page: 260
    Subtopic: Distinguishing features Type: Application

64. Administrative costs of social regulation:
    A) are considerably lower than compliance costs.
    B) are higher than compliance costs.
    C) are roughly equal to compliance costs.
    D) tend to fall once a regulatory commission gets fully established.

    Ans: A Level: Moderate Main Topic: 10.3 Social regulation Page: 260
    Subtopic: Distinguishing features Type: Application

65. The marginal costs and benefits of social regulation:
    A) are easy to measure for determining the optimal level of such regulation.
    B) are difficult to measure for determining the optimal level of such regulation.
    C) are irrelevant in determining the optimal level of such regulation.
    D) focuses on price regulations charged by natural monopolists.

    Ans: B Level: Moderate Main Topic: 10.3 Social regulation Page: 260-261
    Subtopic: The optimal level of social regulation Type: Application

66. Defenders of social regulation point out that:
    A) social regulation is a better alternative than unregulated natural monopoly.
    B) critics who stress the high administrative and compliance costs of social regulation underestimate the social benefits which the regulations produce.
    C) the number of regulatory agencies has declined over the past two decades.
    D) social regulations reduce product prices.

    Ans: B Level: Moderate Main Topic: 10.3 Social regulation Page: 261
    Subtopic: The optimal level of social regulation Type: Application

67. Supporters of social regulation contend that:
    A) the existence of natural monopoly requires a regulatory response from government.
    B) there is a pressing need to eliminate price fixing in U.S. business.
    C) costs are the price that must be paid for a better society.
    D) benefits of public ownership of businesses are greater than the costs.

    Ans: C Level: Moderate Main Topic: 10.3 Social regulation Page: 261
    Subtopic: The optimal level of social regulation Type: Application

68. Critics of social regulation would argue that it:
    A) decreases prices.
    B) increases output.
    C) increases competition.
    D) decreases product innovation.

    Ans: D Level: Easy Main Topic: 10.3 Social regulation Page: 261
    Subtopic: The optimal level of social regulation Type: Application

69. Which is not a major criticism of social regulation?
    A) It is anticompetitive.
    B) It will increase product prices.
    C) It will increase the rate of innovation in the economy.
    D) It will impose a larger burden on small firms compared to large firms.

    Ans: C Level: Easy Main Topic: 10.3 Social regulation Page: 261
    Subtopic: The optimal level of social regulation Type: Application

70. Critics of social regulation argue that it:
    A) increases the price level.
    B) dampens incentives to invest and innovate.
    C) is a relatively greater burden for small firms than for large firms.
    D) has all of the above effects.

    Ans: D Level: Easy Main Topic: 10.3 Social regulation Page: 261
    Subtopic: The optimal level of social regulation Type: Application

71. A criticism of social regulation is that it:
    A) contributes to the growth of natural monopoly.
    B) increases the rate of innovation in the economy.
    C) decreases the influence of the Federal government on business.
    D) results in many unintended and costly side effects.

    Ans: D Level: Moderate Main Topic: 10.3 Social regulation Page: 261
    Subtopic: The optimal level of social regulation Type: Application

72. A caption for a reminder to proponents of social regulation is that:
    A) "there is no free lunch."
    B) "the rule of reason will prevail."
    C) "the public interest will prevail."
    D) "protect the greatest number."

    Ans: A Level: Moderate Main Topic: 10.3 Social regulation Page: 262
    Subtopic: Two reminders Type: Application

73. A caption for a reminder to opponents of social regulation is:
    A) "demand the lowest price.
    B) "less government is not always better."
    C) "social regulations promote exports."
    D) "restraints of trade must be outlawed."

    Ans: B Level: Moderate Main Topic: 10.3 Social regulation Page: 263
    Subtopic: Less government is not always better than more Type: Application

74. According to the U.S. District Court, which of the following antitrust acts was violated by the Microsoft?
    A) Clayton Act
    B) Section I of the Sherman Act
    C) Section II of the Sherman Act
    D) Federal Trade Commission Act

    Ans: B Level: Easy Main Topic: Last Word Page: 263-264
    Type: Application

75. In 2001 a U.S. District higher court ruled that:
    A) Microsoft engaged in a deliberate assault upon entrepreneurial efforts
    B) Microsoft was not involved in any wrong doing
    C) Microsoft created a natural monopoly
    D) Microsoft created a joint venture

    Ans: A Level: Easy Main Topic: Last Word Page: 263-264
    Type: Application

76. As used in this chapter, the term "industrial concentration" refers to industries in which businesses are large absolutely and relative to the market.

    Ans: True Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
    Type: Definition

77. Labour unions are largely exempt from the competition policy.

Ans: True Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
Type: Application

78. Horizontal mergers may be anticompetitive because non-merged firms are foreclosed from selling their products to the buying firm.

Ans: False Level: Moderate Main Topic: 10.1 Industrial concentration
Page: 254 Type: Application

79. A conglomerate merger is a merger between firms at different stages of the production process.

Ans: False Level: Easy Main Topic: 10.1 Industrial concentration Page: 254
Type: Application

80. Natural monopolies occur where economies of scale are so extensive that several firms can produce the product at minimum cost.

Ans: False Level: Easy Main Topic: 10.2 Industrial regulation Page: 257
Type: Definition

81. The regulation of natural monopolies has been criticized because it creates a tendency to use too much labour and too little capital in the production process.

Ans: False Level: Moderate Main Topic: 10.2 Industrial regulation Page: 258
Type: Application

82. Public regulation rather than public ownership has been the primary means used to ensure that the behaviour of natural monopolists is socially acceptable.

Ans: True Level: Easy Main Topic: 10.2 Industrial regulation Page: 258
Type: Application

83. The legal cartel theory indicates that, in any industry where market demand and the long-run average total cost curve intersect close to the latter's minimum, government regulation is mandatory and desirable.

Ans: False Level: Moderate Main Topic: 10.2 Industrial regulation Page: 259
Type: Definition

84. The rationale underlying the legal cartel theory of regulation of natural monopolies is to allow the consumers of their goods or services to benefit from the economies of scale.

Ans: False Level: Moderate Main Topic: 10.2 Industrial regulation Page: 259
Type: Application

85. Under the legal cartel theory of regulation, firms do not want to be regulated by government.

Ans: False Level: Moderate Main Topic: 10.2 Industrial regulation Page: 259
Type: Application

86. Deregulation of industries since the 1970s has resulted in only small gains in economic efficiency for the Canadian economy.

Ans: False Level: Moderate Main Topic: 10.2 Industrial regulation Page: 259
Type: Application

87. Critics of deregulation suggest that it has reduced prices and led to more competition in deregulated industries.

Ans: False Level: Moderate Main Topic: 10.2 Industrial regulation Page: 259
Type: Application

88. The marginal costs and benefits of social regulation are difficult to measure for determining the optimal level of such regulation.

Ans: True Level: Moderate Main Topic: 10.3 Social regulation Page: 260
Type: Application

89. The administrative costs of social regulation exceed the compliance costs of social regulation.

Ans: False Level: Easy Main Topic: 10.3 Social regulation Page: 260-261
Type: Application

90. Social regulation consists of regulation of the conditions under which products are made, the impact of products on society, and the physical qualities of the products.

Ans: True Level: Easy Main Topic: 10.3 Social regulation Page: 260-261
Type: Definition

91. Supporters of social regulation contend that it has provided net benefits to society in the form of greater safety, a better environment, and less discrimination.

    Ans: True Level: Easy Main Topic: 10.3 Social regulation Page: 261
    Type: Application

92. Social regulation raises product prices in two ways. It does so directly because compliance cost normally get passed to consumers, and it does so indirectly by reducing labour productivity.

    Ans: True Level: Easy Main Topic: 10.3 Social regulation Page: 262
    Type: Application

CHAPTER 11 The Demand for Factors of Production

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Chapter 11 The Demand for Factors of Production

1. Factor pricing is important because:
   A) factor prices are a major determinant of money incomes.
   B) factor prices allocate scarce factors among alternative uses.
   C) factor prices, along with factor productivity, are important to firms in minimizing their costs.
   D) of all of the above reasons.

   Ans: D Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Application

2. Which of the following statements best illustrates the concept of derived demand?
   A) As income goes up the demand for farm products will increase by a smaller relative amount.
   B) A decline in the price of margarine will reduce the demand for butter.
   C) A decline in the demand for shoes will cause the demand for leather to decline.
   D) When the price of gasoline goes up, the demand for motor oil will decline.

   Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
   Page: 268 Subtopic: Marginal productivity theory of factor demand
   Type: Application

3. In a perfectly competitive factor market, a firm that hires labour is a:
   A) "price maker."
   B) "wage taker."
   C) "money maker."
   D) "product taker."

   Ans: A Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Definition

4. When economists say that the demand for labour is a derived demand, they mean that the demand for labour is:
   A) dependent on government expenditures for public goods and services.
   B) related to the demand for the product or service labour is producing.
   C) based on the desire of businesses to exploit labour by paying below equilibrium wage rates.
   D) based on the assumption that workers are trying to maximize their money incomes.

   Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Definition

5. The demand for airline pilots results from the demand for air travel. This fact is an example of:
   A) factor substitutability.
   B) rising marginal factor cost.
   C) elasticity of factor demand.
   D) derived demand for labour.

   Ans: D Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Application

6. The demand for capital by a firm is based on the demand for the product that the capital produces. This relationship is referred to as:
   A) product demand.
   B) derived demand.
   C) factor utilization.
   D) cost minimization.

   Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Definition

7. An increase in the demand for computers leads to an increase in demand for computer programmers. This situation arises because:
   A) programmers minimize the costs of production.
   B) the supply of programmers has decreased.
   C) the demand for programmers is a derived demand.
   D) of producer sovereignty in factor markets.

   Ans: C Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Application

8. We say that the demand for labour is a "derived demand" because:
   A) labour is a necessary input in the production of every good or service.
   B) we demand the product which labour helps produce rather than labour service per se.
   C) the forces of supply and demand do not apply directly to labour markets.
   D) labour is hired using the MRP = MRC rule.

   Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Definition

9. The demand for a factor depends primarily upon:
   A) the supply of that factor.
   B) the demand for the product or service which it helps produce.
   C) the price of that input.
   D) the elasticity of supply of substitute inputs.

   Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Application

10. The demand for labour is derived from:
   A) the demands for other variable inputs.
   B) consumer demand for the product or service it is helping to produce.
   C) the cost-minimization rule.
   D) the supply of related inputs.

   Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Application

11. An example of derived demand is the demand for:
   A) new automobiles.
   B) used automobiles.
   C) labour used to produce autos.
   D) foreign instead of domestic autos.

   Ans: C Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Application

12. Derived demand is the demand:
   A) that arises because of monopoly control of factors in a market.
   B) for a product based on the tastes and preferences of consumers.
   C) derived from consumer satisfaction with a product.
   D) for a factor to produce a product.

   Ans: D Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Definition

13. An example of derived demand is the demand for:
   A) housing by consumers.
   B) machines by businesses.
   C) paper products by households.
   D) agricultural products by foreign consumers.

   Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
   Subtopic: Marginal productivity theory of factor demand Type: Application

14. In Canada professional football players earn much higher incomes than professional soccer players. This occurs because:
    A) most football players are good soccer players while the reverse is not true.
    B) consumers have a greater demand for football games than for soccer games.
    C) football and soccer games are highly substitutable products for most consumers.
    D) the marginal productivity of soccer players exceeds that of football players.

    Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
    Subtopic: Marginal productivity theory of factor demand Type: Application

15. Why is the demand for labour referred to as a "derived" demand?
    A) It stems from the drive to minimize production costs to achieve economic efficiency.
    B) It is based on the demand for the product labour produces.
    C) It results from decreases in the supply of labour.
    D) It arises from the shortages in labour markets.

    Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 268 Subtopic: Marginal productivity theory of factor demand
    Type: Application

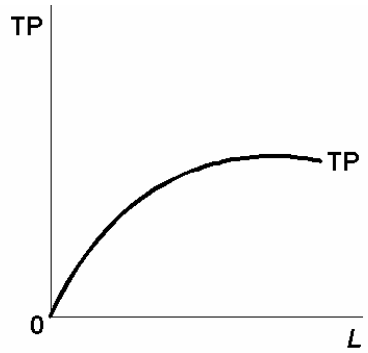
16. The strength of the demand for a factor depends on the:
    A) supply of the factor.
    B) productivity of the factor.
    C) law of increasing product cost.
    D) law of diminishing marginal utility.

    Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Application

17. Marginal product is:
    A) the output of the least skilled worker.
    B) the amount an additional worker adds to the firm's total output.
    C) a worker's output multiplied by the price at which each unit can be sold.
    D) the amount any given worker contributes to the firm's total revenue.
    E) total product divided by the number of workers.

    Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Definition

18. Given the graph below, where TP = total product L = labour input and, the marginal revenue product of labour =(MRP) for a perfectly competitive firm:



A) is constant.
B) increases at an increasing rate.
C) decreases as the labour input increases.
D) first decreases, then reaches its minimum and finally increases as the labour input increases.

Ans: C Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
Subtopic: Marginal productivity theory of factor demand Type: Graphic

19. Marginal revenue product measures the:
A) amount by which the extra production of one more worker increases a firm's total revenue.
B) decline in product price which a firm must accept to sell the extra output of one more worker.
C) increase in total factor cost resulting from the hire of one extra unit of a factor.
D) increase in total revenue resulting from the production of one more unit of a product.

Ans: A Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 269 Subtopic: Marginal productivity theory of factor demand
Type: Definition

20. The marginal revenue product schedule is:
A) the same whether the firm is selling in a perfectly competitive or imperfectly competitive market.
B) the firm's factor demand schedule.
C) the firm's factor supply schedule.
D) upward-sloping.

Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
Subtopic: Marginal productivity theory of factor demand Type: Definition

21. The marginal revenue product of an input in a competitive market decreases as a firm increases the quantity of an input used because of the:
    A) law of diminishing returns.
    B) law of diminishing marginal utility.
    C) homogeneity of the product.
    D) free mobility of factors.

    Ans: A Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 269 Subtopic: Marginal productivity theory of factor demand
    Type: Application

22. The perfectly competitive employer of factor A will maximize the profits from A by equating the:
    A) price of A with the marginal revenue product of A.
    B) marginal productivity of A with the marginal revenue cost of A.
    C) marginal productivity of A with the price of A.
    D) price of A with the marginal revenue cost of A.

    Ans: A Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 269 Subtopic: Marginal productivity theory of factor demand
    Type: Application

23. The MRP curve for labour:
    A) intersects the firm's labour demand curve from above.
    B) is the firm's labour demand curve.
    C) lies below the firm's labour demand curve.
    D) lies above the firm's labour demand curve.

    Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Definition

24. Marginal revenue product describes the:
    A) output produced by the last unit of input employed.
    B) revenue received for the last unit of output produced.
    C) price a consumer paid for the last unit of output produced.
    D) revenue received for the output produced by the last unit of labour employed.

    Ans: D Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Definition

25. The change in a firm's total revenue which results from the hire of an additional worker is measured by:
    A) marginal product.
    B) marginal revenue.
    C) marginal revenue product.
    D) average revenue product.

    Ans: C Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Definition

26. The marginal revenue product of any input is the:
    A) cost of an additional unit of that input.
    B) added profits resulting from the use of one more unit of that input.
    C) additional output resulting from the use of one more unit of that input.
    D) additional revenue resulting from the use of one more unit of that input.

    Ans: D Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Definition

27. Marginal revenue product is the increase in:
    A) total revenue from a decrease in the price of the product.
    B) marginal revenue from a decrease in the price of the product.
    C) marginal revenue from the use of an additional unit of a factor.
    D) total revenue from the use of an additional unit of a factor.

    Ans: D Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Definition

28. The labour demand curve of a perfectly competitive seller:
    A) slopes downward because the elasticity of demand is always less than unity.
    B) slopes downward because of diminishing marginal productivity.
    C) is perfectly elastic at the "going" wage rate.
    D) slopes downward because of diminishing marginal utility.

    Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 269 Subtopic: Marginal productivity theory of factor demand
    Type: Application

29. The marginal revenue product of an economic factor for a firm operating in perfectly competitive product and factor markets:
    A) is the marginal product of the factor divided by the price of the final product.
    B) is the increase in total revenue product resulting from the addition of one more unit of the factor.
    C) is equal to the average revenue product at the lowest point of the average revenue product curve.
    D) decreases as the quantity of output decreases.

    Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 269 Subtopic: Marginal productivity theory of factor demand
    Type: Application

30. Assume labour is the only variable input and that an additional input of labour increases total output from 72 to 78 units. If the product sells for $6 per unit in a perfectly competitive market, the MRP of this additional worker:
    A) is $6.
    B) is $12.
    C) is $36.
    D) is $72.

    Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 269 Subtopic: Marginal productivity theory of factor demand
    Type: Calculation

31. If one worker can pick $30 worth of grapes and two workers together can pick $50 worth of grapes, the:
    A) marginal revenue product of each worker is $25.
    B) marginal revenue product of the second worker is $20.
    C) marginal revenue product of the first worker is $20.
    D) data given do not permit the determination of the marginal revenue product of either worker.

    Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 269 Subtopic: Marginal productivity theory of factor demand
    Type: Calculation

    Use the following to answer questions 32-33:

    Jones owns a barber shop and charges $6 per haircut. By hiring one barber at $10 per hour the shop can provide 24 haircuts per 8-hour day. By hiring a second barber at the same wage rate the shop can now provide a total of 42 haircuts per day.

32. Refer to the information provided. The MP of the second barber is:
A) $240.
B) $108.
C) 18.
D) 42. Main Topic: 11.1 Factor pricing and demand Page: 269

Ans: C Level: Easy
Subtopic: Marginal productivity theory of factor demand Type: Calculation

33. Refer to the information provided. The MRP of the second barber:
A) is 18.
B) is $108.
C) is 42.
D) is $24.

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 269 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

Use the following to answer questions 34-36:

The following is a total-product schedule for a factor. Assume that the quantities of other factors the firm employs remain constant.

Units of factor	Total product
1	24
2	42
3	54
4	64
5	72

34. Refer to the table. If the product the firm produces sells for a constant $2 per unit, the marginal revenue product of the third unit of the factor is:
A) $12.
B) $20.
C) $36.
D) $24.

Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand Page: 269
Subtopic: Marginal productivity theory of factor demand Type: Calculation

35. Refer to the table. If the firm's product sells for a constant $2 and the price of a factor is $16, the firm will employ how many units of the factor?
A) 2
B) 3
C) 4
D) 5

Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 269 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

36. Refer to the table. If the firm can sell 24 units of output at a price of $1.00 and 42 units of output at a price of $0.80, the marginal revenue product of the second unit of the factor is:
A) $9.60.
B) $7.80.
C) $5.40.
D) $12.20.

Ans: A Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 269 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

Use the following to answer questions 37-38:

Assume that the quantities of other factors the firm employs remain constant.

Units of resource	Total product
1	12
2	21
3	27
4	32
5	36

37. Refer to the table above. If the firm's product sells for a constant $2 per unit, what is the marginal revenue product of the third unit of the factor?
A) $8
B) $10
C) $12
D) $14

Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 269 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

38. Refer to the table above. If the firm can sell 12 units of output at a price of $1.00 per unit and 21 units of output at a price of $0.80 per unit, what is the marginal revenue product of the second unit of the factor?
A) $3.20
B) $3.80
C) $4.20
D) $4.80

Ans: D Level: Difficult Main Topic: 11.1 Factor pricing and demand Page: 269
Subtopic: Marginal productivity theory of factor demand Type: Calculation

Use the following to answer questions 39-40:

Units of factor	0	1	2	3	4	5
Total product	0	6	11	15	18	20
Total revenue ($)	0	36	55	60	54	40

39. Refer to the table above. The marginal product of the third unit of the factor is:
A) 3.
B) 4.
C) 5.
D) 6. Main Topic: 11.1 Factor pricing and demand Page: 269

Ans: B Level: Easy
Subtopic: Marginal productivity theory of factor demand Type: Calculation

40. Refer to the table above. The marginal revenue product of the third unit of the factor is:
A) $3.
B) $5.
C) $19.
D) Level: Moderate
$36.

Ans: Main Topic: 11.1 Factor pricing and demand
Page: B269 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

Use the following to answer questions 41-43:

Units of resource	0	1	2	3	4	5
Total product	0	10	18	24	28	30
Total revenue ($)	0	30	54	72	84	90

41. Refer to the table above. The marginal product of the second unit of the factor is:
A) 4.
B) 6.
C) 8.
D) 10. Main Topic: 11.1 Factor pricing and demand Page: 269

Ans: C Level: Easy
Subtopic: Marginal productivity theory of factor demand Type: Calculation

42. Refer to the table above. The marginal product of the fifth unit of the factor is:
A) 2.
B) 4.
C) 6.
D) 8. Main Topic: 11.1 Factor pricing and demand Page: 269

Ans: A Level: Easy
Subtopic: Marginal productivity theory of factor demand Type: Calculation

43. Refer to the table above. The marginal revenue product of the third unit of factor is:
A) $4.
B) $18.
C) $8.
D) $72.

Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
Subtopic: Marginal productivity theory of factor demand Type: Calculation

Use the following to answer questions 44-45:

A farmer who has fixed amounts of land and capital finds that total product is 24 for the first worker hired; 32 when two workers are hired; 37 when three are hired; and 40 when four are hired. The farmer's product sells for $3 per unit and the wage rate is $13 per worker.

44. Refer to the information provided above. The marginal product of the second worker is:
A) 24.
B) 8.
C) 5.
D) 1. Main Topic: 11.1 Factor pricing and demand Page: 269

Ans: B Level: Easy
Subtopic: Marginal productivity theory of factor demand Type: Calculation

45. Refer to the information provided above. The marginal revenue product of the second worker is:
    A) $24.
    B) $8.
    C) $15.
    D) $9.

    Ans: A Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Calculation

46. Marginal factor cost is:
    A) the increase in a firm's total cost caused by hiring one additional unit of an input.
    B) a firm's cost of hiring one group of inputs, such as capital or labour.
    C) the firm's demand curve for a productive factor.
    D) determined by the marginal physical product schedule for an input.

    Ans: A Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Definition

47. Marginal factor cost is:
    A) the increase in variable costs resulting from one more unit of output.
    B) the increase in fixed costs resulting from one more unit of output.
    C) perfectly inelastic to a monopsonist.
    D) the same as the wage rate when a firm is hiring under perfectly competitive conditions.

    Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 269 Subtopic: Marginal productivity theory of factor demand
    Type: Definition

48. Marginal factor cost is:
    A) the increase in total factor cost associated with the production of one more unit of output.
    B) the increase in total factor cost associated with the hire of one more unit of the factor.
    C) total factor cost divided by the number of inputs employed.
    D) the change in total revenue associated with the employment of one more unit of the factor.

    Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
    Subtopic: Marginal productivity theory of factor demand Type: Definition

Use the following to answer questions 49-53:

Assume Manfred's Shoe Shine Parlour hires labour, its only variable input, under perfectly competitive conditions. Shoe shines are also sold competitively.

Units of labour	Total product	Marginal product	Total revenue
0	0	-	-
1	14	14	$42
2	-	10	-
3	30	-	90
4	35	-	-
5	39	-	117
6	-	-	126
7	44	2	132

49. Refer to the data above. How many units of output are produced when 2 workers are employed?
A) 4
B) 16
C) 24
D) 10

Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 269 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

50. Refer to the data above. What is the marginal product of the sixth worker?
A) 2 units
B) 3 units
C) 4 units
D) 5 units

Ans: B Level: Difficult Main Topic: 11.1 Factor pricing and demand Page: 269
Subtopic: Marginal productivity theory of factor demand Type: Calculation

51. Refer to the data above. At what price does each shoe shine sell?
    A) $1
    B) $2
    C) $3
    D) $2.50

    Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Calculation

52. Refer to the data above. If the wage rate is $11, how many workers will Manfred hire to maximize profits?
    A) 1
    B) 2
    C) 3
    D) 5

    Ans: D Level: Difficult Main Topic: 11.1 Factor pricing and demand Page: 270
    Subtopic: Marginal productivity theory of factor demand Type: Calculation

53. Refer to the data above. If Manfred's only fixed input is capital, the total cost of which is $30, then what will be his economic profit?
    A) $62
    B) $42
    C) $28
    D) $32

    Ans: D Level: Difficult Main Topic: 11.1 Factor pricing and demand Page: 270
    Subtopic: Marginal productivity theory of factor demand Type: Calculation

    Use the following to answer question 54:

    Jones owns a barber shop and charges $6 per haircut. By hiring one barber at $10 per hour the shop can provide 24 haircuts per 8-hour day. By hiring a second barber at the same wage rate the shop can now provide a total of 42 haircuts per day.

54. Refer to the information provided. Jones should:
    A) hire the second barber because he will add $28 to profits.
    B) hire the second barber because he will add $108 to profits.
    C) not hire the second barber because he is less productive than the first barber.
    D) not hire the second barber because he will diminish profits.

    Ans: A Level: Difficult Main Topic: 11.1 Factor pricing and demand Page: 270
    Subtopic: Marginal productivity theory of factor demand Type: Calculation

55. A competitive employer should hire additional labour as long as:
    A) the MRP exceeds the wage rate.
    B) the wage rate is less than MP.
    C) average product exceeds MP.
    D) MC exceeds MR.

    Ans: A Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 270
    Subtopic: Marginal productivity theory of factor demand Type: Application

56. If a perfectly competitive firm hiring labour in a perfectly competitive labour market hires labour until $MRP_L < W$ for the last unit of labour hired:
    A) costs are minimized.
    B) profits are maximized.
    C) labour's share of total cost is too small.
    D) labour's share of total cost is too large.

    Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Application

57. If the marginal revenue product (MRP) of labour is less than the wage rate:
    A) the firm is making profits.
    B) the firm is incurring losses.
    C) more labour should be employed.
    D) less labour should be employed.

    Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Application

58. A competitive employer will hire inputs up to the point where the:
    A) marginal product of the input reaches a maximum.
    B) price of the input equals the price of the output.
    C) price of the input equals the marginal product of the input.
    D) price of the input equals the marginal revenue product of the input.

    Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Definition

59. A firm will find it profitable to hire workers up to the point at which their:
    A) marginal factor cost equals their wage rate.
    B) wage rate equals product price.
    C) MP is equal to their MRP.
    D) marginal factor cost is equal to their MRP.

    Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Application

60. A profit-maximizing firm employs factors to the point where:
    A) MRC = MP.
    B) Factor price equals product price.
    C) MRP = MRC.
    D) MP = product price.

    Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand Type: Formula

61. The general rule for hiring any input (say, labour) in the profit-maximizing amount is MRC = MRP. This rule takes the special form W = MRP (where W is the wage rate) when the:
    A) labour supply curve is upward sloping.
    B) supply of labour is inelastic.
    C) firm is hiring labour under imperfectly competitive conditions.
    D) firm is hiring labour under perfectly competitive conditions.

    Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand Page: 270
    Subtopic: Marginal productivity theory of factor demand Type: Application

62. Refer to the table below. If the firm's product sells for a constant $2 per unit and the price of this factor is $8, how many units of the factor will the firm employ?

Assume that the quantities of other factors the firm employs remain constant.

Units of resource	Total product
1	12
2	21
3	27
4	32
5	36

A) 2
B) 3
C) 4
D) 5

Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

Use the following to answer questions 63-65:

Assume that the quantities of other factors employed by the firm remain constant.

Quantity of resource Y employed	Marginal product of Y	Product price
0	—	
1	44	$2.00
2	42	1.90
3	36	1.80
4	32	1.70
5	24	1.60
6	14	1.50
7	2	1.40

63. Refer to the table above. How many units of factor Y would the firm employ at $70?
A) 1
B) 2
C) 3
D) 4 Level: Moderate Main Topic: 11.1 Factor pricing and demand

Ans: B
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

64. Refer to the table above. How many units of factor Y would the firm employ at $60?
A) 2
B) 5
C) 4
D) 3 Level: Moderate Main Topic: 11.1 Factor pricing and demand

Ans: D
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

65. Refer to the table above. How many units of factor Y would the firm employ at $40?
A) 2
B) 3
C) 4
D) 5 Level: Moderate Main Topic: 11.1 Factor pricing and demand

Ans: C
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

66. A profit-maximizing firm's daily total revenue is $155 with 3 workers, $200 with 4 workers, and $250 with 5 workers. The marginal cost of each worker is $60 per day. The firm should:
A) hire a fifth worker.
B) hire four workers.
C) hire more than five workers.
D) none of the above.

Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

Use the following to answer questions 67-69:

The table shows the total production a firm will be able to obtain if it employs varying amounts of factor X while the amounts of the other factors the firm employs remain constant. Assume the product the firm produces sells in the market for $3.00 per unit.

Quantity of resource X employed	Total product
0	0
1	24
2	44
3	60
4	72
5	80
6	84
7	86

67. Refer to the table and information above. How many units of factor X will be employed at $60?
A) 1
B) 2
C) 3
D) 4 Level: Moderate Main Topic: 11.1 Factor pricing and demand

Ans: B
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

68. Refer to the table and information above. How many units of factor X will be employed at $48?
A) 2
B) 3
C) 4
D) 5 Level: Moderate Main Topic: 11.1 Factor pricing and demand

Ans: B
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

69. Refer to the table and information above above. How many units of factor X will be employed at $24?
A) 3
B) 4
C) 5
D) 6

Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

70. Under perfect competition the market price of an output is $3. The output schedule of a firm using input X is listed in the table below. If the price of input X is $12, how many units of input X will the firm employ to maximize profits?

Units of X	Marginal product
1	10.0
2	9.9
3	8.8
4	7.7
5	6.6
6	5.5
7	4.4
8	3.3
9	2.2

A) 4
B) 5
C) 7
D) 9

Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand Page: 270
Subtopic: Marginal productivity theory of factor demand Type: Calculation

71. Assume the Bully Burger restaurant is hiring labour in an amount such that the MRC of the last worker is $16 and her MRP is $12. On the basis of this information we can say that:
A) profits will be increased by hiring additional workers.
B) profits will be increased by hiring fewer workers.
C) marginal revenue product must exceed average revenue product.
D) the restaurant is maximizing profits.

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Application

Use the following to answer questions 72-75:

Employment	Total product	Product price
0	0	$3
1	12	3
2	22	3
3	30	3
4	36	3
5	40	3
6	42	3

72. On the basis of the information we can say that the firm is:
A) selling its product in a perfectly competitive market.
B) selling its product in an imperfectly competitive market.
C) hiring workers in a perfectly competitive market.
D) hiring workers in an imperfectly competitive market.

Ans: A Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 270
Subtopic: Marginal productivity theory of factor demand Type: Application

73. Refer to the data above. If the firm is hiring workers under perfectly competitive conditions at a wage rate of $22, it will choose to employ:
A) 1 worker.
B) 2 workers.
C) 3 workers.
D) 4 workers.

Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

74. Refer to the data above. If the firm is hiring workers under perfectly competitive conditions at a wage rate of $10, it will choose to employ:
A) 2 workers.
B) 3 workers.
C) 4 workers.
D) 5 workers.

Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

75. Refer to the data above. Which of the following best represents the labour demand schedule for this firm?

(A)		(B)		(C)		(D)	
WR	Qd	WR	Qd	WR	Qd	WR	Qd
$35	1	$35	2	$35	3	$40	1
29	2	29	3	29	4	35	2
23	3	23	4	23	5	30	3
17	4	17	5	17	6	25	4

A) column (A)
B) column (B)
C) column (C)
D) column (D) Main Topic: 11.1 Factor pricing and demand Page: 270

Ans: A Level: Difficult
Subtopic: Marginal productivity theory of factor demand Type: Calculation

Use the following to answer questions 76-79:

The following table is for a perfectly competitive market for factors.

Number of workers	Total product	Product price ($)
0	0	3
1	16	3
2	26	3
3	34	3
4	40	3
5	44	3

76. Refer to the table above. At a wage rate of $11, the firm will choose to employ:
A) 2 workers.
B) 3 workers.
C) 4 workers.
D) 5 workers.

Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

77. Refer to the table above. At a wage rate of $23, the firm will choose to employ:
A) 2 workers.
B) 3 workers.
C) 4 workers.
D) 5 workers.

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

78. Refer to the table. above How many more workers will the firm hire when the wage rate is $15?
A) 1 worker
B) 2 workers
C) 3 workers
D) 4 workers

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

79. Refer to the table above. If the product price increases from $3 to $4, then at the wage rate of $15, the firm will hire:
A) 2 workers.
B) 3 workers.
C) 4 workers.
D) 5 workers.

Ans: D Level: Difficult Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

Use the following to answer questions 80-81:

A farmer who has fixed amounts of land and capital finds that total product is 24 for the first worker hired; 32 when two workers are hired; 37 when three are hired; and 40 when four are hired. The farmer's product sells for $3 per unit and the wage rate is $13 per worker.

80. Refer to the information provided above. How many workers should the farmer hire?
A) 1
B) 2
C) 3
D) 4 Level: Moderate Main Topic: 11.1 Factor pricing and demand

Ans: C
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

81. Refer to the information provided above. What is the farmer's profit-maximizing output?
A) 20
B) 32
C) 37
D) 40 Level: Moderate Main Topic: 11.1 Factor pricing and demand

Ans: C
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

82. A competitive employer is using labour in such an amount that labour's MRP is $10 and its wage rate is $8. This firm:
A) should hire more labour because this will increase profits.
B) should hire more labour, although this may either increase or decrease profits.
C) is currently hiring the profit-maximizing amount of labour.
D) is selling its product in an imperfectly competitive market.

Ans: A Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Application

83. A firm is hiring the profit-maximizing amount of an input when:
A) AVC = MC.
B) MP = MRC.
C) MRC = MR.
D) MRP = MRC.

Ans: D Level: Easy Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand Type: Formula

Use the following to answer questions 84-85:

Units of resource	0	1	2	3	4	5
Total product	0	10	18	24	28	30
Total revenue ($)	0	30	54	72	84	90

84. Refer to the table above. The price of the product being produced by this factor is:
A) $3.
B) $2.
C) $1.
D) $4.

Ans: A Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

85. Refer to the table above. The factor demand data indicate that the firm is:
A) buying its factor in an imperfectly competitive market.
B) buying its factor in a perfectly competitive market.
C) selling its product in a perfectly competitive market.
D) selling its product in an imperfectly competitive market.

Ans: C Level: Difficult Main Topic: 11.1 Factor pricing and demand Page: 270
Subtopic: Marginal productivity theory of factor demand Type: Application

86. Assuming a firm is selling its output in a perfectly competitive market, its factor demand curve can be determined by:
A) multiplying total product by product price.
B) multiplying marginal product by product price.
C) dividing total revenue by marginal product.
D) comparing marginal product with various possible input prices.

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Definition

87. The MRP curve for labour:
    A) is downsloping and shows the relationship between wage rates and the quantity of labour demanded.
    B) is perfectly elastic if the firm is selling its output competitively.
    C) is upward-sloping and lies above the labour supply curve.
    D) will shift location when the wage rate changes.

    Ans: A Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Application

88. According to the marginal productivity theory, the labour demand schedule for a competitive seller is:
    A) the same as the marginal factor cost schedule.
    B) the same as the marginal productivity schedule.
    C) the same as the marginal revenue product schedule.
    D) independent of the value of the product being produced.

    Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Definition

89. The labour demand schedule is identical with the:
    A) marginal revenue product schedule.
    B) marginal factor cost schedule.
    C) marginal revenue schedule.
    D) product demand schedule.

    Ans: A Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Definition

90. Assume the Apex Manufacturing company is perfectly competitive in both the hire of labour and in the sale of its product. Apex's labour demand curve would be:
    A) vertical at the current level of employment.
    B) horizontal at the "going" wage rate.
    C) upward sloping.
    D) downward sloping.

    Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Application

91. The labour demand curve of a perfectly competitive seller:
    A) slopes downward because the firm must lower price to sell more output.
    B) slopes downward because labour productivity increases as successive workers are hired.
    C) is perfectly elastic because the firm is hiring an insignificant portion of the total labour supply.
    D) slopes downward because the marginal product of successive workers declines.

    Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Application

    Use the following to answer questions 92-94:

    Assume that the firm is hiring labour in a perfectly competitive market.

Units of labour	Total product	Product price
0	0	$2.20
1	15	2.00
2	28	1.80
3	39	1.60
4	48	1.40
5	55	1.20
6	60	1.10

92. Refer to the data above. If the wage rate is $20, how many workers will the firm choose to employ?
    A) 5
    B) 4
    C) 3
    D) 2

    Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
    Page: 270 Subtopic: Marginal productivity theory of factor demand
    Type: Calculation

93. Refer to the data above. If the wage rate is $11, how many workers will the firm choose to employ?
A) 5
B) 4
C) 3
D) 2

Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

94. The data above reveal that:
A) the firm is selling its product in a perfectly competitive market.
B) the firm is selling its product in an imperfectly competitive market.
C) there is no level of output at which this firm can operate at a profit.
D) the law of diminishing returns is not applicable to this firm.

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270-271 Subtopic: Marginal productivity theory of factor demand
Type: Application

95. Other things the same, we would expect the labour demand curve of a perfectly competitive seller to be:
A) of unitary elasticity.
B) more elastic than that of an imperfectly competitive seller.
C) less elastic than that of an imperfectly competitive seller.
D) perfectly elastic.

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270-271 Subtopic: Marginal productivity theory of factor demand
Type: Application

96. Other things equal, the factor demand curve of an imperfectly competitive seller will:
A) lie below its marginal revenue product curve.
B) not be subject to diminishing marginal productivity.
C) be less elastic than that of a perfectly competitive seller.
D) be more elastic than that of a perfectly competitive seller.

Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270-271 Subtopic: Marginal productivity theory of factor demand
Type: Application

97. Refer to the table below. If the firm can produce 24 units at a price of $1.00, 42 units at a price of $0.80, and 54 units at a price of $0.60, then the firm is:

The following is a total-product schedule for a factor. Assume that the quantities of other factors the firm employs remain constant.

Units of factor	Total product
1	24
2	42
3	54
4	64
5	72

A) selling in a perfectly competitive market.
B) selling in an imperfectly competitive market.
C) minimizing its costs at a product price of $1.00.
D) maximizing profits at a product price of $0.60.

Ans: B Level: Easy Main Topic: 11.1 Factor pricing and demand
Page: 270-271 Subtopic: Marginal productivity theory of factor demand
Type: Application

Use the following to answer questions 98-100:

Units of factor	0	1	2	3	4	5
Total product	0	6	11	15	18	20
Total revenue ($)	0	36	55	60	54	40

98. Refer to the table above. The factor demand data indicate that the firm is:
A) buying its factor in an imperfectly competitive market.
B) buying its factor in a perfectly competitive market.
C) selling its product in a perfectly competitive market.
D) selling its product in an imperfectly competitive market.

Ans: D Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270-271 Subtopic: Marginal productivity theory of factor demand
Type: Application

99. Refer to the table above. The price of the product being produced by this factor:
A) is a constant $3.
B) is a constant $4.
C) varies from $2 to $6.
D) varies from $7 to $12.

Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 271-272 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

100. Refer to the table above. How many units of a factor would the profit-maximizing firm use if the price of this factor was $19.00?
A) 1
B) 2
C) 3
D) 4

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 271-272 Subtopic: Marginal productivity theory of factor demand
Type: Calculation

101. The labour demand curve of a firm which is selling its product in an imperfectly competitive market will:
A) fall, solely because of the law of diminishing returns.
B) fall, solely because marginal productivity is declining.
C) be perfectly elastic if the firm is hiring labour competitively.
D) fall, both because of declining marginal productivity and declining product prices.

Ans: D Level: Difficult Main Topic: 11.1 Factor pricing and demand
Page: 271-272 Subtopic: Marginal productivity theory of factor demand
Type: Application

102. The MRP curve is the factor demand curve for:
A) neither the perfectly competitive nor the imperfectly competitive seller.
B) the imperfectly competitive seller, but not the perfectly competitive seller.
C) the perfectly competitive seller, but not the imperfectly competitive seller.
D) both the perfectly competitive and imperfectly competitive seller.

Ans: D Level: Easy Main Topic: 11.1 Factor pricing and demand
Page: 271-272 Subtopic: Marginal productivity theory of factor demand
Type: Definition

103. The labour demand curve of an imperfectly competitive seller is downward sloping:
A) solely because of diminishing marginal utility.
B) both because of diminishing returns and the necessity to lower price to sell more output.
C) solely because product price must be reduced to sell more output.
D) solely because of diminishing returns.

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 271-272 Subtopic: Marginal productivity theory of factor demand
Type: Application

104. If a firm is selling in an imperfectly competitive product market, then:
A) average product will be less than marginal product for any number of workers hired.
B) the marginal products of successive workers must be sold at lower prices.
C) the marginal products of successive workers can be sold at higher prices.
D) the marginal products of successive workers can be sold at a constant price.

Ans: B Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 271-272 Subtopic: Marginal productivity theory of factor demand
Type: Application

105. Other things equal, we would expect the labour demand curve of a monopolistic seller to:
A) decline more rapidly than that of a perfectly competitive seller.
B) decline less rapidly than that of a perfectly competitive seller.
C) decline at the same rate as that of a perfectly competitive seller.
D) be more elastic than that of a perfectly competitive seller.

Ans: A Level: Difficult Main Topic: 11.1 Factor pricing and demand
Page: 271-272 Subtopic: Marginal productivity theory of factor demand
Type: Application

106. If the wage rate increases:
A) a perfectly competitive producer will hire less labour, but an imperfectly competitive producer will not.
B) an imperfectly competitive producer will hire less labour, but a perfectly competitive producer will not.
C) a perfectly competitive and an imperfectly competitive producer will both hire less labour.
D) an imperfectly competitive producer may find it profitable to hire either more or less labour.

Ans: C Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 271-272 Subtopic: Marginal productivity theory of factor demand
Type: Application

107. A decrease in the price of a productive factor will result in each of the following except a(n):
A) downward shift in the average-cost curves for all products which use the factor.
B) increase in the quantities produced and sold of all products which use the factor.
C) rightward shift in the demand curves for all products which use the factor.
D) increase in the quantity demanded of this productive factor.

Ans: C Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 273 Subtopic: Changes in product demand Type: Application

108. The demand for a factor will increase if the:
A) price of the factor increases.
B) quantity of the factor decreases.
C) price of the product the firm is producing decreases.
D) price of the product the firm is producing increases.

Ans: D Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 273 Subtopic: Changes in product demand Type: Application

109. Suppose the demand for strawberries rises sharply, resulting in an increased price of strawberries. As it relates to strawberry pickers, we could expect the:
A) MRP curve to shift to the right.
B) MRP curve to shift to the left.
C) MRC curve to shift downward.
D) MP curve to shift downward.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 273 Subtopic: Changes in product demand Type: Application

110. The labour demand curve of a firm:
A) will shift to the left if the price of the product the labour is producing falls.
B) is perfectly elastic if the firm is selling its product in a perfectly competitive market.
C) reflects a direct relationship between the number of workers hired and the money wage rate.
D) is the same as its marginal product curve.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 273 Subtopic: Changes in product demand Type: Application

111. Which is an example of a change in product demand that increases labour demand?
   A) Access to computers increases the productivity of mail order businesses, thus increasing the demand for their workers.
   B) Tourism increases in popularity, increasing the demand for workers at tourist resorts.
   C) A decrease in the price of trucks decreases the cost of transporting goods, thus increasing the demand for truckers.
   D) A change in work rules increases output per worker in the auto industry, thus increasing the demand for auto workers.

   Ans: B Level: Moderate Main Topic: 11.2 Determinants of factor demand
   Page: 273 Subtopic: Changes in product demand Type: Application

112. Which of the following will not shift the demand curve for labour?
   A) the use of a larger stock of capital with the labour force
   B) a change in the wage rate
   C) an increase in the price of the product which labour is helping to produce
   D) the adoption of a more efficient method of combining labour and capital in the productive process

   Ans: B Level: Moderate Main Topic: 11.2 Determinants of factor demand
   Page: 273 Subtopic: Changes in product demand Type: Application

113. Gambling increases in popularity, thus increasing the demand for card dealers at casinos. This would be caused by which of the following?
   A) An increase in labour productivity
   B) An increase in product demand
   C) A decrease in the price of another factor
   D) An increase in the price of another factor

   Ans: B Level: Moderate Main Topic: 11.2 Determinants of factor demand
   Page: 273 Subtopic: Changes in product demand Type: Application

114. Which is an example of a change in product demand that decreases labour demand?
   A) An increase in the price of paper increases the cost of making books, thus decreasing the demand for bookbinders.
   B) The widespread availability of convenience stores reduces the demand for workers delivering milk to homes.
   C) An increase in the price of steel increases the cost of producing cars and trucks, thus decreasing the demand for automobile workers.
   D) A decline in productivity in retailing decreases the demand for retail sales workers.

   Ans: B Level: Difficult Main Topic: 11.2 Determinants of factor demand
   Page: 273 Subtopic: Changes in product demand Type: Application

115. A change in the price of an input will usually:
A) shift a firm's cost curves.
B) cause the firm to alter the combination of inputs it employs.
C) induce the firm to change its level of output.
D) do all of the above.

Ans: D Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 273 Subtopic: Changes in product demand Type: Application

116. Employers will hire more units of a factor if:
A) the price of the factor increases.
B) the productivity of the factor increases.
C) the price of the good being produced declines.
D) the price of a complementary factor rises.

Ans: B Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274 Subtopic: Changes in productivity Type: Application

117. The demand curve for labour would shift leftward as the result of:
A) an increase in the price of the product labour is producing.
B) a decrease in the productivity of labour.
C) an increase in the price of labour.
D) a decrease in the price of capital, provided the output effect exceeds the substitution effect.

Ans: B Level: Easy Main Topic: 11.2 Determinants of factor demand Page: 274
Subtopic: Changes in productivity Type: Application

118. Which is an example of a change in productivity that increases labour demand?
A) Mail-order catalogue sales rise, thus increasing the demand for workers in the mail-order business.
B) Sport utility vehicles increase in popularity, thus increasing the demand for the workers who make them.
C) A decrease in the price of lumber decreases the cost of building homes, thus increasing the demand for construction workers.
D) A technological change increases output per worker in the computer industry, thus increasing the demand for computer workers.

Ans: D Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274 Subtopic: Changes in productivity Type: Application

119. Which is an example of a change in productivity that decreases labour demand?
A) A financial crisis in Asian nations reduces the demand for exports to Asia, thus decreasing the demand for domestic workers in the computer industry.
B) Tattoos fade in popularity, thus decreasing the demand for tattoo artists.
C) More government regulation decreases output per worker in the fast food industry, thus decreasing demand for fast food workers.
D) An increase in the price of construction equipment reduces the demand for construction equipment operators

Ans: C Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 274 Subtopic: Changes in productivity Type: Application

120. Suppose a technological improvement increases the productivity of a firm's capital and, simultaneously, its workers' union negotiates a wage increase. We can predict that:
A) the firm will use relatively more capital and relatively less labour.
B) the firm will use relatively more labour and relatively less capital.
C) inputs of capital and labour will be unchanged.
D) the firm's equilibrium output will necessarily increase.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

121. Which of the following will not cause a shift in the demand for factor X?
A) a decline in the price of factor X
B) an increase in the price of the product factor X is producing
C) a decrease in the price of substitute factor Y
D) an increase in the productivity of factor X

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

122. Which is an example of a change in the price of another factor that decreases labour demand?
A) A decline in the demand for computers in Europe reduces the demand for workers in the domestic computer industry.
B) The rise of hair salons for both men and women reduces the demand for barbers.
C) A decrease in the educational skills of manufacturing workers decreases the demand for such workers.
D) An increase in the price of chemical equipment increases the cost of producing fertilizer, thus decreasing the demand for workers who make fertilizer.

Ans: D Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

123. An increase in the price of aluminum increases the cost of producing aluminum and reduces the demand for auto workers. This would caused by which change in a determinant of labour demand?
A) A fall in labour productivity
B) An increase in product demand
C) A decrease in product demand
D) An increase in the price of another factor

Ans: D Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

124. Which is an example of a change in the price of another factor that increases labour demand?
A) Software sales rise, thus increasing the demand for software developers.
B) Snowboarding increases in popularity, thus increasing the demand for the workers who make snowboards.
C) A decrease in the price of wood decreases the cost of furniture, thus increasing the demand for furniture workers.
D) A technological change increases output per worker in the computer industry, thus increasing the demand for computer workers.

Ans: C Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

125. A manufacturer using both capital and labour decides to use more labour and less capital as a consequence of an increase in the price of capital. This is likely the result of:
A) capital and labour being complementary inputs.
B) capital and labour being substitute inputs.
C) the output effect being greater than the substitution effect.
D) diminishing returns being applicable to capital but not to labour.

Ans: B Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

126. If two inputs are complementary and employed in fixed proportions, an increase in the price of one input will:
A) decrease the demand for the other input.
B) increase the demand for the other input.
C) increase the quantity demanded for the other input.
D) have no effect on the demand for the other input.

Ans: A Level: Easy Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

127. A decline in the price of factor A will:
A) increase the demand for complementary factor B.
B) shift the demand curve for A to the left.
C) shift the demand curve for A to the right.
D) reduce the demand for complementary factor B.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

128. Assume the price of capital doubles and, as a result, firms make no change in the relative quantities of capital and labour they employ. This implies that:
A) labour is not readily substitutable for capital.
B) the law of diminishing returns is not applicable.
C) the firms are producing an inferior good.
D) the demand for capital is highly price elastic.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

129. "A firm will employ more of an input whose relative price has fallen and, conversely, will use less of an input whose relative price has risen. Thus a fall in the price of capital will increase the relative price of labour and thereby reduce the demand for labour." This describes the:
A) output effect.
B) substitution effect.
C) idea of derived demand.
D) law of diminishing returns.

Ans: B Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Definition

130. Capital and labour:
A) are always complementary.
B) are always substitutable.
C) may be either complementary or substitutable.
D) are both normal inputs.

Ans: C Level: Easy Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

131. Suppose capital is readily substitutable for labour and that the price of capital falls. We can conclude that the:
A) substitution effect will tend to reduce the demand for labour.
B) output effect will tend to reduce the demand for labour.
C) demand for labour will necessarily decline.
D) demand for labour will necessarily increase.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

132. The demand curve for labour will most likely increase when the price of a:
A) complementary input increases, provided the substitution effect is greater than the output effect.
B) substitute input decreases, provided the output effect is greater than the substitution effect.
C) substitute input increases, provided the output effect is greater than the substitution effect.
D) substitute input decreases, provided the substitution effect is greater than the output effect.

Ans: B Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

133. Suppose the productivity of labour increases and at the same time the price of capital, which is complementary to labour, increases. As a result, the demand for labour:
A) will increase.
B) will decrease.
C) may either increase or decrease.
D) will not change.

Ans: C Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

134. If two factors are highly substitutable for one another:
A) a decrease in the price of one will increase unit costs of production.
B) an increase in the price of one will increase the demand for the other.
C) an increase in the price of one will reduce the demand for the other.
D) a decline in the price of one will increase the demand for the other.

Ans: B Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

135. The substitution effect indicates that a profit-seeking firm will use:
A) more of an input whose price has fallen and less of other inputs in producing a given output.
B) more of all inputs if production costs fall.
C) more of those inputs whose marginal productivity is the greatest.
D) less of an input whose price has fallen and more of other inputs in producing a given output.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Definition

136. Suppose the price of the product which labour is producing increases and simultaneously the price of capital, which is substitutable for labour, decreases. Assuming that the substitution effect is greater than the output effect, the demand for labour:
A) will increase.
B) will decrease.
C) may either increase or decrease.
D) will not change.

Ans: C Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

137. Suppose there is a decline in the demand for the product labour is producing. Furthermore, the price of capital, which is complementary to labour, increases. Thus the demand for labour:
A) will increase.
B) will decrease.
C) may either increase or decrease.
D) will not change.

Ans: B Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

138. If factors A and B are complementary and employed in fixed proportions:
A) a change in the price of A will have no effect on the quantity of B employed.
B) an increase in the price of A may either increase or decrease the demand for B.
C) an increase in the price of A will increase the demand for B.
D) an increase in the price of A will decrease the demand for B.

Ans: D Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

139. If the price of labour falls relative to the price of capital, and as a result the quantity of capital employed decreases, it can be concluded that:
A) the substitution effect is greater than the output effect.
B) the output effect is greater than the substitution effect.
C) the income effect is greater than the output effect.
D) labour cannot be easily substituted for capital.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

140. Assume that a firm's production technique is such that varying combinations of labour and capital can be used to produce output. If the price of labour falls relative to the price of capital and the firm decides to use more labour in the production process, this decision is:
A) solely the result of the substitution effect.
B) solely the result of the output effect.
C) probably the result of both the substitution and output effects.
D) the result of neither the substitution nor the output effect.

Ans: C Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

141. Suppose that the price of capital increases relative to the wage rate and, as a result, the demand for labour increases. This means that:
A) the substitution effect is greater than the output effect.
B) labour and capital are complementary factors.
C) it is impossible to substitute labour for capital.
D) the output effect is greater than the substitution effect.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

142. Assume the price of capital falls relative to the price of labour and, as a result, the demand for labour increases. Therefore:
A) the output effect is greater than the substitution effect.
B) capital is very highly substitutable for labour.
C) the income effect is greater than the output effect.
D) the substitution effect is greater than the output effect.

Ans: A Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

143. A major reason for the increased demand for fast-food workers is:
A) the demonstrated nutritional quality of fast foods.
B) that more women have entered the labour force, causing families to substitute restaurant meals for home-prepared meals.
C) that the minimum wage has increased, making such jobs more attractive to workers.
D) that the price of home-prepared meals has fallen relative to the price of restaurant meals.

Ans: B Level: Difficult Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

144. The rapid decline in the price of personal computes has:
A) increased the demand for software programmers.
B) increased the demand for office workers in those offices where computers and office workers are substitute factors.
C) reduced the demand for office workers in those offices where computers and office workers are complementary factors.
D) reduced the demand for sales clerks in computer stores.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Subtopic: Changes in the prices of other factors Type: Application

145. The output effect occurs:
A) only when wage elasticity of demand is greater than "1."
B) because a change in the price of a factor will alter costs and therefore the equilibrium output.
C) only when the inputs being employed are substitutes.
D) only when the inputs being employed are complementary.

Ans: B Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 275 Subtopic: Changes in the prices of other factors Type: Application

146. "A change in an input price will alter both production costs and the profit-maximizing output. Thus a decline in the price of capital will reduce production costs, increase the profit-maximizing output, and thereby increase the demand for labour." This describes the:
A) output effect.
B) substitution effect.
C) idea of derived demand.
D) law of diminishing returns.

Ans: A Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 275 Subtopic: Changes in the prices of other factors Type: Definition

147. Suppose complementary inputs A and B are being used by a firm in the profit-maximizing amounts. If the price of A now increases, the firm should use:
A) more of B, provided the substitution effect exceeds the output effect.
B) more of B because of the substitution effect.
C) less of B because of the substitution effect.
D) less of B because of the output effect.

Ans: D Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 275 Subtopic: Changes in the prices of other factors Type: Application

148. If technology dictates that labour and capital must be used in fixed proportions, an increase in the price of capital will cause a firm to use:
A) more labour as a consequence of the substitution effect.
B) more labour as a consequence of the output effect.
C) less labour as a consequence of the substitution effect.
D) less labour as a consequence of the output effect.

Ans: D Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 275 Subtopic: Changes in the prices of other factors Type: Application

149. Suppose capital and labour are used in fixed proportions so that each machine requires only one worker. If a decline in the price of capital occurs, then the demand for labour will:
A) decline solely because of the substitution effect.
B) increase solely because of the substitution effect.
C) increase solely because of the output effect.
D) decrease solely because of the output effect.

Ans: C Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 275 Subtopic: Changes in the prices of other factors Type: Application

150. The elasticity of factor demand measures the:
A) responsiveness of workers to changes in wage rates.
B) responsiveness of producers to changes in factor prices.
C) ratio of marginal revenue product to factor price.
D) sensitivity of marginal revenue product to changes in product price.

Ans: B Level: Easy Main Topic: 11.3 Elasticity of factor demand
Page: 276 Subtopic: Elasticity of factor demand Type: Definition

Use the following to answer questions 151-152:

Wage rate	Quantity of labourdemanded
$16	2000
14	1600
12	1200
10	1000
8	800

151. Refer to the data above. For the $16 to $14 range of wage rates, labour demand is:
A) perfectly elastic.
B) elastic.
C) perfectly inelastic.
D) inelastic.

Ans: B Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 276 Subtopic: Elasticity of factor demand Type: Calculation

152. Refer to the data above. Over the $10 to $8 range of wage rates, the demand for labour is:
A) perfectly elastic.
B) elastic.
C) unit elastic.
D) inelastic.

Ans: C Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 276 Subtopic: Elasticity of factor demand Type: Calculation

153. If a 10 percent wage increase in a particular labour market results in a 5 percent decline in employment in that market, labour demand is:
A) unit elastic.
B) elastic.
C) inelastic.
D) perfectly elastic.

Ans: C Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 276 Subtopic: Elasticity of factor demand Type: Application

154. A firm is observed using 10 units of input X when the price of X is $2, and 15 units of X when its price increases to $4. What is the elasticity of demand for input X in this price range?
A) 1/2 = .5
B) 3/5 = .6
C) 5/3 = 1.67
D) 2

Ans: B Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 276 Subtopic: Elasticity of factor demand Type: Calculation

155. What will the elasticity of factor demand be if unit wages rise by 8 percent and the number of employed workers falls by 5 percent?
A) 0.63
B) 1.61
C) 2.90
D) 4.00

Ans: A Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 276 Subtopic: Elasticity of factor demand Type: Calculation

156. What will the elasticity of factor demand be if unit wages rise by 5 percent and the number of employed workers falls by 12 percent?
A) 0.42
B) 1.60
C) 2.40
D) 6.00

Ans: C Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 276 Subtopic: Elasticity of factor demand Type: Calculation

157. The elasticity of factor demand will be greater the:
A) smaller the portion of the product's total costs accounted for by the factor.
B) less the elasticity of demand for the product it is producing.
C) larger the number of substitute factors which are available.
D) more rapid the rate of decline in its marginal product.

Ans: C Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Ease of factor substitutability Type: Application

158. Other things being equal, if a once-competitive firm attains a high degree of monopoly power, its factor demand curve will:
A) become perfectly inelastic.
B) remain perfectly elastic.
C) become more elastic.
D) become more inelastic.

Ans: D Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Ease of factor substitutability Type: Application

159. The more inelastic the demand for a factor the:
A) less elastic its marginal revenue product curve.
B) more elastic its marginal revenue product curve.
C) greater the potential for factor substitution.
D) greater the productivity of the factor.

Ans: A Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Ease of factor substitutability Type: Application

160. Other things being equal, a firm's demand for labour is likely to be more elastic than its demand for capital if:
A) labour costs are a smaller proportion of total costs than capital costs.
B) the firm uses labour-intensive production techniques.
C) substitutions of one factor for another are difficult.
D) the demand for its final product is price elastic.

Ans: B Level: Difficult Main Topic: 11.3 Elasticity of factor demand Page: 277
Subtopic: Ease of factor substitutability Type: Application

161. The demand for labour would most likely become less inelastic as a result of a decrease in the:
A) elasticity of the demand for the product that the labour produces.
B) time for employers to make technological changes or purchase new equipment.
C) proportion of labour costs to total costs.
D) rate at which marginal revenue product declines.

Ans: D Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Ease of factor substitutability Type: Application

162. Which of the following statements is incorrect? Other things equal, the demand for labour will be less elastic the:
A) more rapid the decline in marginal product.
B) greater the difficulty in substituting other inputs for labour.
C) greater the elasticity of product demand.
D) smaller the ratio of labour costs to total costs.

Ans: C Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Elasticity of product demand Type: Application

163. Other things being equal, the demand for a factor of production will be less elastic if the demand for the final product it produces is:
A) elastic.
B) inelastic.
C) unitary elastic.
D) perfectly elastic.

Ans: B Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Elasticity of product demand Type: Application

164. The relationship between the elasticity of product demand and the elasticity of demand for labour employed in its production is such that, other things being equal:
A) the more elastic the demand for the product, the less elastic the demand for labour.
B) the more elastic the demand for the product, the more elastic the demand for labour.
C) the elasticity of product demand only affects the elasticity of labour demand when the product market is perfectly competitive.
D) if product demand is perfectly elastic, labour demand will be perfectly inelastic.

Ans: B Level: Difficult Main Topic: 11.3 Elasticity of factor demand Page: 277
Subtopic: Elasticity of product demand Type: Application

165. A change in a factor's price will have a greater effect on the quantity of the factor demanded the:
A) smaller the change in the factor's price.
B) smaller the factor's share of total cost of production.
C) more elastic is the demand for the product the factor helps to make.
D) more inelastic is the demand for the product the factor helps to make.

Ans: C Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Elasticity of product demand Type: Application

166. Assume that the coefficient of elasticity of product demand is .5 in industry A and is 3.2 in industry B. Other things equal, labour demand will be:
A) more elastic in industry A than in B.
B) unit elastic in both industry A and B.
C) more elastic in industry B than in A.
D) relatively inelastic in both industry A and B.

Ans: C Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Elasticity of product demand Type: Application

167. The elasticity of demand for labour varies:
A) directly with changes in the interest rate.
B) directly with labour's share of the total cost of the product.
C) inversely with the elasticity of demand for the final product.
D) inversely with the ease of substituting labour for other productive factors.

Ans: B Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Elasticity of product demand Type: Application

168. A firm is both hiring labour and selling output in perfectly competitive markets and is maximizing profits. It is, currently, operating in the elastic range of its MRP curve. If the wage rate increases, its total spending on wages at the new equilibrium will:
A) be larger
B) be smaller.
C) be unchanged.
D) change in an undetermined direction.

Ans: B Level: Difficult Main Topic: 11.3 Elasticity of factor demand Page: 277
Subtopic: Ratio of factor cost to total cost Type: Application

169. Which would result in a decrease in the elasticity of demand for a particular factor?
A) a decrease in the rate at which the marginal product of that factor declines
B) an increase in the elasticity of demand for the product that the factor helps to produce
C) a decrease in the percentage of the firm's total costs accounted for by the factor
D) an increase in the number of other factors that are good substitutes for the particular factor

Ans: C Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Ratio of factor cost to total cost Type: Application

170. Suppose that the labour cost-total cost ratio in industry A is 82 percent while in industry B it is 21 percent. Other things equal, labour demand will be:
A) more elastic in industry A than in B.
B) unit elastic in both industry A and B.
C) more elastic in industry B than in A.
D) relatively elastic in both industry A and B.

Ans: A Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Subtopic: Ratio of factor cost to total cost Type: Application

171. Other things equal, the relationship between the relative importance of a given type of labour in a firm's total costs and the elasticity of demand for that labour is such that the:
A) demand for labour will be "elastic" only if labour accounts for less than 50 percent of total costs.
B) demand for labour will be "elastic" only if labour accounts for 50 percent or more of total costs.
C) larger the labour cost-total cost ratio, the smaller will be the elasticity of labour demand.
D) larger the labour cost-total cost ratio, the greater will be the elasticity of labour demand.

Ans: D Level: Difficult Main Topic: 11.3 Elasticity of factor demand Page: 277
Subtopic: Ratio of factor cost to total cost Type: Application

172. Other things equal, if wage rates increased by 20 percent, the greatest decline in employment would occur when labour costs are a:
A) large proportion of total costs and product demand is elastic.
B) small proportion of total costs and product demand is elastic.
C) large proportion of total costs and product demand is inelastic.
D) small proportion of total costs and product demand is inelastic.

Ans: A Level: Difficult Main Topic: 11.3 Elasticity of factor demand Page: 277
Subtopic: Ratio of factor cost to total cost Type: Application

173. What happens when technological advance makes available a new highly productive capital good for which MP/P is greater than for the labour for which it is a substitute factor?
A) Labour will replace the new capital because labour is now cheaper.
B) The new capital will replace labour because it reduces the firms' costs.
C) More of both the new capital and labour will be used because firms are more productive.
D) Less of both the new capital and labour will be used because the firms do not know how to use the new technology.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Application

174. The introduction of automatic elevator equipment allowed firms to handle the movement of people in a multi-story building at less cost, thus decreasing the demand for elevator operators. The best explanation for this change is that the:
A) marginal product of elevator operators was equal to its price.
B) marginal product of automatic elevator equipment was equal to its price.
C) marginal product of automatic elevator equipment divided by its price was greater than that for elevator operators.
D) marginal product of elevator operators divided by its price was greater than that for automatic elevator equipment.

Ans: C Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Application

175. Assume that an appliance manufacturer is employing variable factors X and Y in such amounts that the MRPs of the last units of X and Y employed are $100 and $60 respectively. Factor X can be hired at $50 per unit and factor Y at $20 per unit. The firm:
A) should hire more of both X and Y.
B) should hire more of Y and less of X.
C) is producing with the least-costly combination of X and Y, but could increase its profits by employing more of X and less of Y.
D) is using the least-cost combination of X and Y, but could increase its profits by employing less of both X and Y.

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Application

176. Suppose a firm is hiring factors L and M under perfectly competitive conditions to produce product Y which sells for a price of $2 in a perfectly competitive market. The prices of L and M are $10 and $4 respectively. In equilibrium the MPs of L and M, respectively, are:
A) 1 and 1.
B) 2 and 5.
C) 10 and 4.
D) 5 and 2.

Ans: D Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Calculation

177. If a firm is employing quantities of factors J and K so that $MRP_J/P_J = MRP_K/P_K = 1$, then:
A) MP_J/P_J may either exceed or be less than MP_K/P_K.
B) MP_J/P_J will be less than MP_K/P_K.
C) MP_J/P_J will exceed MP_K/P_K.
D) $MP_J/P_J = MP_K/P_K$.

Ans: D Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Formula

178. If a firm is hiring variable factors D and F in perfectly competitive input markets, it will minimize the cost of producing any level of output by employing D and F in such amounts that:
A) the price of each input equals its MP.
B) $MP_D = MP_F$.
C) $MP_D/P_D = MP_F/P_F$.
D) $MP_D/P_F = MP_F/P_D$.

Ans: C Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Formula

179. A business is employing inputs such that the marginal product of labour is 40 and the marginal product of capital is 90. The price of labour is $20 and the price of capital is $30. If the business wants to minimize costs while keeping output constant, then it should:
A) use more labour and less capital.
B) use less labour and less capital.
C) use less labour and more capital.
D) make no change in factor use.

Ans: C Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Calculation

180. A firm combines two factors, A and B, to produce an output Q. Their respective marginal revenue products are $30 and $21. A costs $15 a unit and B $7 a unit. To reduce the cost of Q:
A) more B and less A should be used.
B) more A and less B should be used.
C) more of both factors should be used.
D) less of both factors should be used.

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Calculation

181. The price of capital is $12 per machine-hour and the price of labour is $3 per hour. Below are production schedules for a firm showing the possible combinations of capital and labour that will produce 100 units of output. Which combination will this cost-minimizing firm choose?
A) Labour: 20 Capital: 5 MP_L: 5 MP_K: 20
B) Labour: 10 Capital: 10 MP_L: 10 MP_K: 10
C) Labour: 5 Capital: 20 MP_L: 20 MP_K: 5
D) Labour: 4 Capital: 25 MP_L: 25 MP_K: 4

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Calculation

182. A firm is producing 100 pencils per week. The production process requires labour and capital as inputs. Labour costs $6 per labour hour and capital costs $12 per machine hour. Currently, the marginal product of labour is 18 pencils and the marginal product of capital is 36 pencils. To minimize the cost of producing this level of output the firm should use:
A) more capital and less labour.
B) more labour and less capital.
C) less labour and less capital.
D) the current amounts of labour and capital.

Ans: D Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Calculation

183. Suppose a firm is employing all its inputs so that the MRP per dollar spent on each is the same. This suggests that the:
A) amount of each factor employed will depend on both its price and its productivity.
B) price of each input must be identical.
C) firm is using the same quantity of each input.
D) total expenditure on each input is identical.

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Application

184. Assume a pencil manufacturer is employing factors C and D in such quantities that the MRPs of the last units hired are $80 and $50 respectively. The price of factor C is $90 and the price of D is $35. This firm:
A) should hire less of C and more of D.
B) should hire more of both C and D.
C) should hire less of both C and D.
D) is using the least-cost combination of C and D.

Ans: A Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Calculation

Use the following to answer questions 185-187:

Suppose a firm hires both labour (L) and capital (C) under perfectly competitive conditions. The price of labour is P_L and that of capital is P_C. The marginal product of labour is MP_L and that of capital is MP_C. The firm sells its product competitively at a price of P_X.

185. Refer to the information provided above. Which of the following must pertain if the firm is to minimize the cost of producing any output?
A) $MP_C = MP_L = P_X$.
B) $MP_C = P_C$ and $MP_L = P_L$.
C) $MP_C/P_C = MP_L/P_L$.
D) $MP_C/P_X = MP_L/P_X$.

Ans: C Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Formula

186. Refer to the information provided above. If $MP_C/P_C > MP_L/P_L$, the firm:
A) may be maximizing profits, but it is not minimizing costs.
B) may be minimizing costs, but it is not maximizing profits.
C) is neither minimizing costs nor maximizing profits.
D) is minimizing costs and maximizing profits.

Ans: C Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Application

187. Refer to the information provided above. In competitive labour markets, the marginal cost of an additional unit of labour:
A) is equal to $P_L \times MP_L$.
B) is equal to MP_L/P_L.
C) is equal to P_L.
D) cannot be determined from the information given.

Ans: C Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 278 Subtopic: The least-cost rule Type: Formula

188. A firm operating in perfectly competitive product and factor markets uses three factors, A, B, and C, whose prices and productivities at current output levels are given below.

	A	B	C
Price	$ 10	$10	$2
MRP	20	6	4

To achieve an optimal factor mix for its current output the firm should employ more:
A) A and B and less C.
B) A and B and C.
C) A and C and less B.
D) B and less A and C.

Ans: C Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279 Subtopic: The profit-maximizing rule Type: Application

189. Assuming a competitive factor market, a firm is hiring several factors in the profit-maximizing amounts when the:
A) firm's total outlay on factors is minimized.
B) marginal revenue product of each factor is equal to its price.
C) price of each factor employed is the same.
D) marginal revenue product of the last unit of each factor hired is the same.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279 Subtopic: The profit-maximizing rule Type: Application

190. A firm is hiring factors X, Y, and Z in the profit-maximizing amounts when:
A) MRPx/Px equals MRPy/Py equals MRPz/Pz equals 1.
B) the sum of the MRPs of the three factors is at a minimum.
C) the marginal revenue productivity of all three factors is the same.
D) the marginal revenue product of the last dollar spent on each of the three factors is the same.

Ans: A Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279 Subtopic: The profit-maximizing rule Type: Application

191. The equation $MP_L/P_L = MP_C/P_C$:
A) designates the MR = MC level of output.
B) is based on the assumption of imperfect competition in the hiring of labour and capital.
C) is a sufficient condition for the maximization of profits.
D) is a necessary, but not sufficient, condition for the maximization of profits.

Ans: D Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279 Subtopic: The profit-maximizing rule Type: Application

192. Which of the following statements is correct?
A) If the profit-maximizing rule is fulfilled, it necessarily follows that the cost-minimization rule is being fulfilled.
B) The profit-maximizing and the cost-minimizing rules are such that the fulfilling of one has no bearing upon the fulfilling of the other.
C) If the profit-maximizing rule is fulfilled, the cost-minimization rule may or may not be fulfilled.
D) If the cost-minimization rule is fulfilled, it necessarily follows that the profit-maximizing rule is being fulfilled.

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279 Subtopic: The profit-maximizing rule Type: Application

193. If $MP_a/P_a = MP_b/P_b$ and $MRP_a/P_a = MRP_b/P_b > 1$, this firm is:
A) producing its output with the least costly combination of factors, but is not producing the profit-maximizing output.
B) maximizing profits, but failing to minimize costs.
C) neither maximizing profits nor minimizing costs.
D) combining factors a and b so as to minimize costs and maximize profits.

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279 Subtopic: The profit-maximizing rule Type: Application

194. A firm which is motivated by self interest should:
A) employ the combination of factors which will produce the profit-maximizing output at the minimum cost.
B) hire each input so the productivity of each is equal at the margin.
C) always use large amounts of the most productive inputs and small amounts of the least productive inputs in producing its output.
D) always use large amounts of cheap inputs and small amounts of expensive inputs in producing its output.

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279 Subtopic: The profit-maximizing rule Type: Application

195. Assuming perfect competition, which of the following are equivalents?
A) $MRP_L/P_L = MRP_C/P_C$ and $P_x = 1/MC$.
B) $MRP_L/P_L = MRP_C/P_C$ and $P_x = AVC$.
C) $P_x = MC$ and $MRP_L/P_L = MRP_C/P_C = 1$.
D) $P_x = MC$ and $MP_L/P_L = MP_C/P_C$.

Ans: C Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279 Subtopic: The profit-maximizing rule Type: Formula

196. The profit-maximizing and the least-cost combination of inputs are:
A) the result of unrelated decisions.
B) always identical.
C) such that the minimization of costs always results in profit maximization.
D) such that the maximization of profits always entails the least-cost combination of inputs.

Ans: D Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279 Subtopic: The profit-maximizing rule Type: Application

Use the following to answer questions 197-200:

The following marginal product data for factors a and b. The output of these independent factors sells in a perfectly competitive market at $1 per unit.

a	Input a MP_a	b	Input b MP_b
1	25	1	40
2	20	2	36
3	15	3	32
4	10	4	24
5	5	5	20
6	2	6	16
7	1	7	8

197. Refer to the data above. Assuming the prices of factors a and b are $5 and $8 respectively, what is the least costly combination of factors for the firm to employ in producing 192 units of output?
A) 2 of a and 6 of b
B) 6 of a and 2 of b
C) 4 of a and 3 of b
D) 3 of a and 4 of b

Ans: D Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

198. Refer to the data above. Assuming the prices of factors a and b are $5 and $8 respectively, what is the profit-maximizing combination of factors?
A) 7 of a and 7 of b
B) 6 of a and 4 of b
C) 5 of a and 7 of b
D) 4 of a and 4 of b

Ans: C Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

199. Refer to the data above. If the firm hires the profit-maximizing combination of factors, what will be the firm's economic profit?
A) $170
B) $76
C) $145
D) $138

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

200. Refer to the data above. Assume now that the prices of a and b rise to $15 and $20 respectively to maximize profits what combination of a and b should the employer hire?
A) 3 of a and 5 of b
B) 5 of a and 7 of b
C) 7 of a and 7 of b
D) 6 of a and 2 of b

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

Use the following to answer questions 201-206:

Quantity oflabour	MP of labour	MRP of labour	Quantity ofcapital	MP of capital	MRP of capital
1	15	$45	1	8	$24
2	12	36	2	6	18
3	9	27	3	5	15
4	6	18	4	4	12
5	3	9	5	3	9
6	1	3	6	2	6

201. Refer to the data above. This firm is selling its product in:
A) an imperfectly competitive market at prices which decline as sales increase.
B) a perfectly competitive market at $3 per unit.
C) a perfectly competitive market at $2 per unit.
D) an imperfectly competitive market at $3 per unit.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

202. Refer to the data above. If the prices of labour and capital are $9 and $15 respectively, the firm will hire:
A) 5 units of labour and 3 of capital.
B) 5 units of labour and 2 of capital.
C) 4 units of labour and 4 of capital.
D) none of the above.

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

203. Refer to the data above. The firm's total output will be:
A) 38 units.
B) 60 units.
C) 64 units.
D) 27 units.

Ans: C Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

204. Refer to the data above. The firm's total revenue will be:
A) $114.
B) $180.
C) $129.
D) $192.

Ans: D Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

205. Refer to the data above. If labour and capital are the only inputs, the firm's total costs will be:
A) $106.
B) $126.
C) $47.
D) $90.

Ans: D Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

206. Refer to the data above. Assuming labour and capital are the only inputs, the firm's economic profits will be:
A) $102.
B) $82.
C) $67.
D) $28.

Ans: A Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

207. Assume that a computer disk manufacturer is employing factors so that the MRP of the last unit hired for factor A is $120 and the MRP of the last unit hired for factor B is $75. The price of factor A is $40 and the price of factor B is $25. To maximize profit the firm should:
A) hire more of factor A and less of factor B
B) hire less of factor A and more of factor B
C) hire less of both factor A and factor B
D) hire more of both factor A and factor B

Ans: D Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

208. Suppose that the production of wheat requires two inputs, labour and fertilizer. The price of labour is $4.50 and the price of fertilizer is $3.00. A farmer is currently employing the inputs such that the marginal product of labour is 11 and the marginal product of fertilizer is 8. If the farmer is a cost-minimizer, he should:
A) use more labour and less fertilizer.
B) use more fertilizer and less labour.
C) use more labour and more fertilizer.
D) continue using the same amounts of each input.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

209. Assume that a perfectly competitive firm uses two factors-labour (L) and capital (C)-to produce a product. In which situation would the firm be maximizing profit?

	MRPL	MRPC	PL	PC
A)	20	40	60	80
B)	20	40	20	40
C)	30	30	20	20
D)	60	80	20	10

A) Choice A
B) Choice B
C) Choice C
D) Choice D

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

210. Assume that a perfectly competitive firm uses two factors, labour (L) and capital (C), to produce a product. In which situation would the firm be maximizing profit?

	MRPL	MRPC	PL	PC
A)	$100	$200	$300	$400
B)	$100	$200	$200	$100
C)	$150	$200	$150	$200
D)	$300	$400	$300	$200

A) Choice A
B) Choice B
C) Choice C
D) Choice D

Ans: C Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

211. A firm is employing inputs such that the marginal product of labour is 25 and the marginal product of capital is 40. The price of labour is $5 and the price of capital is $8. If the firm wants to minimize costs, then it should:
A) use more labour and less capital.
B) use less labour and less capital.
C) use less labour and more capital.
D) make no change in factor use.

Ans: D Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

212. In a competitive industry, suppose the marginal revenue product (MRP) of the last doughnut baker hired is $35, the MRP of the last bagel baker hired is $15, and a bakery must pay doughnut bakers $40 a day and bagel bakers $10 per day. To maximize profits the bakery should hire:
A) more doughnut bakers and fewer bagel bakers.
B) fewer doughnut bakers and more bagel bakers.
C) less of both doughnut bakers and bagel bakers.
D) more of both doughnut bakers and bagel bakers.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

213. A perfectly competitive firm in the factor and product markets sells its output for $1 and pays factors P_L = $4 and P_K = $3. What is the profit-maximizing combination of L and K for the firm?

Q_L	MP_L	Q_K	MP_K
1	28	1	18
2	24	2	15
3	20	3	12
4	16	4	9
5	9	5	6
6	4	6	3
7	2	7	2
8	1	8	1.5
9	5	9	1

A) 8 of L and 8 of K
B) 4 of L and 3 of K
C) 5 of L and 2 of K
D) 6 of L and 6 of K

Ans: D Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

214. Assume a firm purchases factors a and b under perfectly competitive conditions and combines these factors to produce X. Product X is sold in a perfectly competitive market. The MP of a and b are 6 and 3 respectively and the prices of a and b are $12 and $6 respectively. If equilibrium exists, the price of X will be:
A) $1.
B) $.50.
C) $2.
D) $5.

Ans: C Level: Difficult Main Topic: 11.4 Optimal combination of factors
Page: 279-280 Subtopic: Numerical illustration Type: Calculation

215. In the marginal productivity theory of income distribution, when all markets are perfectly competitive, the payment for each unit of a factor is equal to its:
A) total product.
B) marginal product.
C) marginal revenue product.
D) total revenue product.

Ans: C Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 281 Subtopic: Marginal productivity theory of income distribution
Type: Application

216. The marginal productivity theory of income distribution suggests:
A) that government should subsidize the most productive workers through a system of transfer payments.
B) that each individual should receive income based on his contribution to total output.
C) the notion of "from each according to his ability, to each according to his wants."
D) that factor owners should receive income based upon their needs.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 281 Subtopic: Marginal productivity theory of income distribution
Type: Definition

217. Those who advocate the marginal productivity theory of income distribution argue that:
A) government policy should be used to redistribute income based on need.
B) family income should be based on a family's demand for products.
C) factor markets will set incomes based on workers' contributions to the output of scarce goods and services.
D) monopoly and monopsony power do not affect factor payments of the overall distribution of income.

Ans: C Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 281 Subtopic: Marginal productivity theory of income distribution
Type: Application

218. Critics of the marginal productivity theory of income distribution claim that the theory is flawed due to:
A) the law of diminishing returns.
B) the existence of imperfect competition--i.e., of monopoly and monopsony--in output and factor markets.
C) the problem of comparing different kinds of factors, such as capital and labour.
D) government policies which redistribute income.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 281 Subtopic: Marginal productivity theory of income distribution
Type: Application

219. A major criticism of the marginal productivity theory of income distribution is that:
A) the demand for labour factors is price inelastic.
B) achieving equality in incomes will take time.
C) imperfectly competitive firms are only interested in profit maximization.
D) productive factors are unevenly distributed which causes excessive income inequality.

Ans: D Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 281 Subtopic: Marginal productivity theory of income distribution
Type: Application

220. A major criticism of the marginal productivity theory of income distribution is that:
A) the demand for labour factors is price inelastic.
B) the demand for labour factors is price elastic.
C) it produces inequality in income distribution.
D) perfectly competitive firms are only interested in profit maximization.

Ans: C Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 281 Subtopic: Marginal productivity theory of income distribution
Type: Application

221. The marginal productivity theory of income distribution has been criticized because:
A) the resulting distribution of income is likely to be too equal to maintain production incentives.
B) income from inherited property is inconsistent with the theory.
C) perfectly competitive conditions characterize most factor markets.
D) it fails to recognize that factor demand is derived from product demand.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 281 Subtopic: Marginal productivity theory of income distribution
Type: Application

222. "Income receivers should be paid in accordance with the value of output each produces." This statement is consistent with the:
A) monopoly theory of income distribution.
B) marginal productivity theory of income distribution.
C) least-cost, but not profit-maximizing, combination of inputs.
D) concept of compensating wage differences.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 281 Subtopic: Marginal productivity theory of income distribution
Type: Application

223. The fact that monopoly and monopsony exist in factor markets means that:
A) the marginal productivity theory of income distribution is valid.
B) factor prices do not accurately measure contributions to output.
C) the resulting income distribution is ethically correct.
D) income shares do not exhaust the total output.

Ans: B Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 281 Subtopic: Marginal productivity theory of income distribution
Type: Application

224. "The Case of ABMs" best illustrates the:
A) law of diminishing marginal utility.
B) the substitutability of factors.
C) idea of derived demand.
D) principle of unintended side-effects.

Ans: B Level: Easy Main Topic: Last word Page: 282 Type: Application

225. ABMs and human bank tellers:
A) are substitute factors.
B) are so-called "public factors."
C) have both declined in number because of bank mergers.
D) are complementary factors.

Ans: A Level: Easy Main Topic: Last word Page: 282 Type: Application

226. The rapid spread of ABMs has:
A) resulted from changes in banking laws.
B) increased the demand for bank tellers.
C) reduced the demand for bank tellers.
D) increased the hourly wage paid to bank tellers.

Ans: C Level: Easy Main Topic: Last word Page: 282 Type: Application

227. The introduction of ABMs machines has:
A) increased the demand for a substitute factor-human tellers.
B) increased the demand for a complementary factor-human tellers.
C) decreased the demand for a substitute factor-human tellers.
D) decreased the demand for a complementary factor-human tellers.

Ans: C Level: Easy Main Topic: Last word Page: 282 Type: Application

228. What happened in the banking industry with the introduction of ABMs which had a higher MP/P than for the substitute factor of human tellers?
A) Human tellers replaced many ABMs because people did not want to use ABMs
B) ABMs replaced many human tellers because it reduced banks' costs.
C) More of both ABMs and human tellers were used because banks were more productive.
D) Less of both ABMs and human tellers were used because banks did not know how to use the new technology

Ans: B Level: Moderate Main Topic: Last word Page: 282
Type: Application

229. The demand for a factor is a derived demand based on the demand for the product it helps to produce.

Ans: True Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 268
Type: Application

230. The prices of factors are an important factor in the determination of money income.

Ans: True Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
Type: Application

231. The competitive firm's marginal revenue product of labour will fall as output expands because marginal product diminishes.

Ans: True Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 269 Type: Application

232. The marginal revenue product curve of a perfectly competitive seller declines solely because of the law of diminishing returns.

Ans: True Level: Easy Main Topic: 11.1 Factor pricing and demand Page: 269
Type: Application

233. Producers should hire factors until the total output of each is equal.

Ans: False Level: Easy Main Topic: 11.1 Factor pricing and demand
Page: 269-270 Type: Application

234. It will be profitable for a firm to hire additional units of any factor up to the point at which its MRP is equal to its MRC.

Ans: True Level: Easy Main Topic: 11.1 Factor pricing and demand
Page: 269-270 Type: Application

235. A firm's demand schedule for a factor is the firm's marginal product schedule for the factor.

Ans: False Level: Moderate Main Topic: 11.1 Factor pricing and demand
Page: 270 Type: Application

236. The demand for a factor depends on its productivity and the market value of the product it is producing.

Ans: True Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 273 Type: Application

237. Assume that capital and labour are substitutes in production. The output effect of an increase in the price of capital decreases the demand of labour.

Ans: True Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Type: Application

238. If the substitution effect outweighs the output effect, an increase in the price of a substitute factor will increase the demand for labour.

Ans: True Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 274-275 Type: Application

239. If two factors are complementary, a decrease in the price of one will reduce the demand for the other.

Ans: False Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 275 Type: Application

240. If two factors are complementary, an increase in the price of one will increase the demand for the other.

Ans: False Level: Moderate Main Topic: 11.2 Determinants of factor demand
Page: 275 Type: Application

241. The less the elasticity of product demand, the greater the elasticity of factor demand.

Ans: False Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 276-277 Type: Application

242. The price of a factor is not directly a determinant of the price elasticity of demand for the factor.

Ans: True Level: Difficult Main Topic: 11.3 Elasticity of factor demand
Page: 277 Type: Application

243. The more elastic the demand for a product the less elastic will be the demand for the factors employed in producing it.

Ans: False Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Type: Application

244. Other things equal, the less competitive the market in which a firm sells its product, the less elastic will be its factor demand curve.

Ans: True Level: Moderate Main Topic: 11.3 Elasticity of factor demand
Page: 277 Type: Application

245. To achieve profit maximization, a firm must produce the profit-maximizing output with the least amount of economic factors.

Ans: False Level: Moderate Main Topic: 11.4 Optimal combination of factors
Page: 279 Type: Application

