Your name: **Your student number:**

Concordia University
John Molson School of Business
Finance Department

MID-TERM TEST

COMM 220 C • Fall 2012

A total of 40 points

40 multiple-choice questions worth one point each.

Answering

Enter your answers on the computer grading form provided.

You may also provide a written explanation or comment for any of the questions, and part marks may be awarded or deducted. This is optional. Write your explanations on the last page.

Do not detach pages.

Aids

Ruler, translation dictionary, nonprogrammable calculator are permitted. Do rough work in empty spaces and on the two blank pages near the end.

Prohibited

Scrap paper, tattoos, cell phones, smart phones, stupid phones, computers, PDAs, iPods, CD and DVD players, Blue Ray players, microwave ovens, satellite dishes, CRT, LCD, LED, and plasma TVs.

Tips

Read the captions to tables and figures carefully.

For questions with ranges, pick the tightest range that contains the answer.

The answer choice *Uncertain* means the same as *Cannot be determined*. It does not mean that you are uncertain.

Better off and worse off refer to changes in utility.

To the serious minded

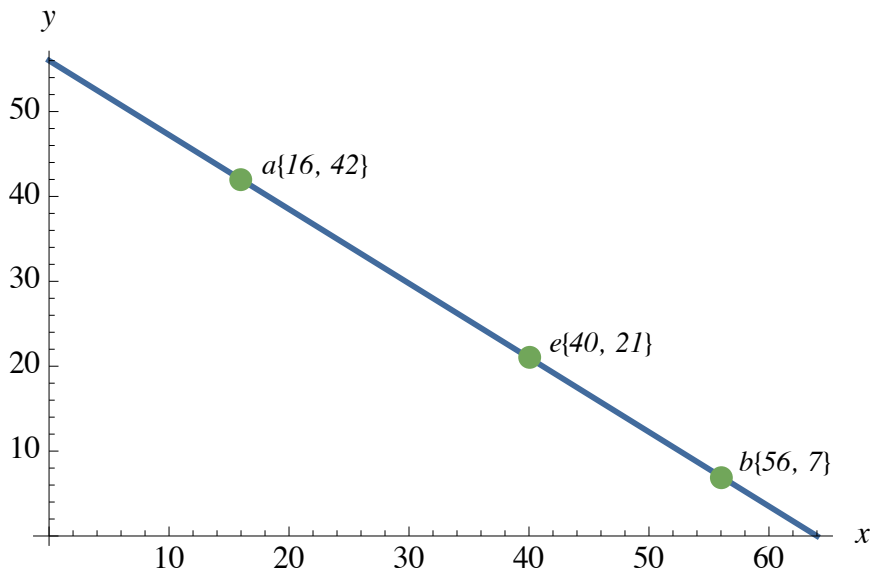
Some answer choices are just plain silly. It's comic relief—I hope.

Submitting

Submit the computer grading form and this document at the end of the test. Your test will not be graded unless both are submitted.

Gregory Lypny

PART 1



Lucy's budget line for x and y. Her initial indifference curve (not shown) passes through her endowment e. Lucy's marginal rate of substitution at e is less than the price ratio. The value of her endowment is \$896.

1. What is the price ratio?

   A. $\frac{8}{5}$ B. $\frac{3}{8}$ C. $\frac{66}{52}$ D. $\frac{7}{8}$ E. $\frac{2}{1}$

2. What is the price of y?

   A. \$11
   B. \$14
   C. \$16
   D. \$18
   E. \$21

3. To reach her consumption optimum, Lucy will…

   A. sell some x in exchange for y.
   B. buy some x in exchange for y.
   C. do nothing because e is a happy place.

4. As Lucy moves towards her consumption optimum, her marginal rate of substitution will…

   A. increase.
   B. decrease.
   C. remain the same.
   D. vary randomly.
   E. stop suddenly and refuse to cooperate.

5. At her consumption optimum, Lucy will be…

   A. poorer.
   B. wealthier.
   C. worse off.
   D. better off.
   E. a little shorter.

6. Anyone with the same endowment as Lucy and facing the same prices would ultimately make the same choice.

   A. True

   B. False

7. If both the prices of x and y were one dollar higher, Lucy would have been wealthiest with…

   A. bundle a.

   B. bundle b.

   C. bundle e.

   D. a bundle of 100 dollar bills big enough to choke a horse.

8. If instead of an endowment worth $896, Lucy had a one-time income of $896…

   A. she would be wealthier.

   B. she would be poorer.

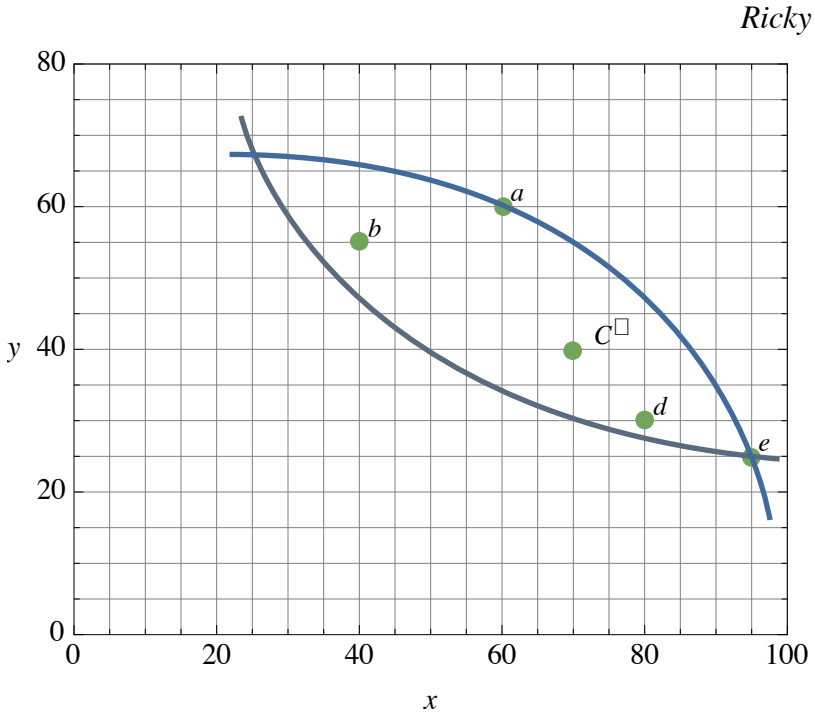
   C. she would choose a different bundle to consume.

   D. she would choose the same bundle to consume.

   E. her utility at her consumption optimum would be different.

ROUGH WORK HERE

PART 2



An Edgeworth box for a two-person, pure-exchange economy. It is to scale, and all of the points have integer coordinates. The endowment is *e* and the Pareto optimum is *C**. If Lucy and Ricky trade, it is competitive.

9. Who values the next unit of *x* more at *e*?

   A. Lucy
   B. Ricky
   C. Curly
   D. Larry
   E. Moe

10. Who buys *x* in exchange for *y*?

   A. Lucy
   B. Ricky
   C. Curly
   D. Larry
   E. Moe

11. What is the price ratio in equilibrium?

   A. $\frac{4}{3}$ B. $\frac{1}{2}$ C. $\frac{3}{5}$ D. $\frac{3}{4}$ E. $\frac{7}{9}$

12. Point *b* is a Pareto improvement over *e*.

   A. True
   B. False
   C. Cannot be determined

13. What type of equilibrium does C^* represent?

    A. Biochemical
    B. Celestial
    C. General
    D. Partial
    E. Hormonal

14. A reallocation from a to d is a Pareto improvement.

    A. True
    B. False
    C. Cannot be determined

15. Arrow's Impossibility Theorem tells us that…

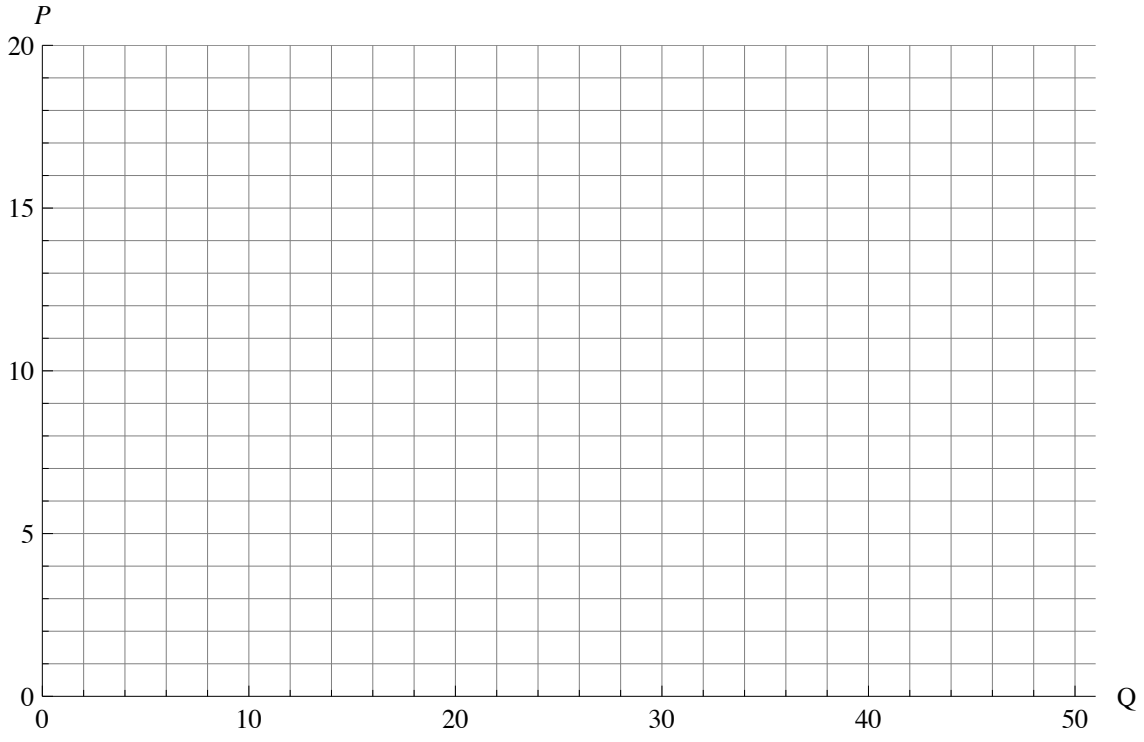
    A. a competitive equilibrium is Pareto optimal.
    B. Lucy and Ricky are wealthiest at the Pareto optimum.
    C. there can be more than one Pareto optimum.
    D. a Pareto optimum is impossible to attain because of the status quo bias.
    E. any allocation made on behalf of Lucy and Ricky by an outsider is unlikely to be Pareto optimal.

ROUGH WORK HERE

PART 3

Buyers			Sellers		
ID	Qd	Pd	ID	Qs	Ps
B1	6	$18	S1	12	$7
B2	6	$17	S2	8	$9
B3	6	$13	S3	7	$10
B4	9	$13	S4	6	$12
B5	7	$11	S5	8	$15

Individual offers to buy and sell in a competitive market. Q is quantity and P is offer price. The offers are collected and an equilibrium price determined such that the quantity demanded is equal to the quantity supplied. Assume that the equilibrium price is midway between the marginal buyer and seller offers. Use the grid below to draw the supply and demand schedules. Note the spacing of the gridlines.



16. What is the equilibrium?

    A. 18 units at $15
    B. 22 units at $10
    C. 24 units at $9.50
    D. 30 units at $10
    E. 27 units at $11.50

17. What is the producers' surplus?

    A. ≤ $75
    B. ≤ $100
    C. ≤ $125
    D. ≤ $150
    E. > $150

18. Is the equilibrium Pareto optimal?

    A. No because not all of the goods available were traded.
    B. No because the consumers' and producers' surpluses are not equal.
    C. Yes because the market is competitive.
    D. Yes because aggregate demand is less than aggregate supply.
    E. Yes because the market cleared.

19. How will the equilibrium be affected if the government imposes a quantity tax of $3 per unit?

    A. The price will fall and the quantity will rise.
    B. The price will rise and the quantity will fall.
    C. The price will rise.
    D. The quantity will fall.
    E. None of the above.

ROUGH WORK HERE

PART 4

Asset	Red (prob. = ⅖)	Blue (prob. = ⅗)
G1	-$3,600	$12,900
G2	-$3,000	$12,800
G3	$18,000	-$1,500

Three risky assets whose immediate payoffs depend on the Red or Blue outcome with the probabilities shown. Whether the loss occurs on heads or tails does not affect your calculation of expected payoff.

20. If you were risk neutral and could choose only one asset, which would it be?

    A. G1
    B. G2
    C. G3
    D. Indifferent between G1 or G2
    E. Indifferent between G2 or G3

21. If you were risk averse and could choose only one asset, which would it be?

    A. G1
    B. G2
    C. G3
    D. G1 or G2 depending on tastes
    E. G1 or G3 depending on tastes

22. Suppose you could choose any two and combine them into a portfolio. Is there one that all risk averse investors would include in their portfolios? (Tip: You don't have to work out the portfolio payoffs to arrive at an answer.)

    A. G1
    B. G2
    C. G3
    D. No, it depends on tastes.
    E. Cannot be determined.

23. Now also suppose that these assets are traded and have market prices. In light of your answer to the previous question, which asset is likely to have the lowest expected rate of return?

    A. G1
    B. G2
    C. G3
    D. Depends on tastes.
    E. Cannot be determined.

PART 5

	A	B	C
Investor Type I	$55	$50	$41
Investor Type II	$48	$41	$47
Investor Type III	$54	$58	$47

Consider an experiment in which subjects trade a stock in a competitive market. The stock pays a sure dividend of $65 in each of three periods, A, B, and C. Subjects are assigned to investor types who differ according to the marginal tax rate they face each period. The table shows *after-tax* dividends, and this is private information.

24. What is the stock's equilibrium price in period A?

    A. ≤ $155
    B. ≤ $165
    C. ≤ $175
    D. ≤ $185
    E. > $185

25. What is the stock's equilibrium price in period C?

    A. ≤ $155
    B. ≤ $165
    C. ≤ $175
    D. ≤ $185
    E. > $185

26. From your answer to the previous question, you can conclude that price is determined by investors with…

    A. the highest average tax rate across time.
    B. the highest marginal tax rate each period.
    C. the lowest average tax rate across time.
    D. the lowest marginal tax rate each period.
    E. the nicest shoes.

27. Suppose that Investor I's tax rate in period B was five percentage points higher. What affect would this have on the price of the stock?

    A. It would be higher in all three periods.
    B. It would be lower in all three periods.
    C. It would be different in one of the periods.
    D. It would be different in two of the periods.
    E. It would be unaffected.

28. Suppose that, in addition to a spot market, there is a forward market in period A for delivery in B. What is the equilibrium forward price for that contract?

    A. ≤ $70
    B. ≤ $90
    C. ≤ $110
    D. ≤ $130
    E. > $130

PART 6

Consider a market experiment, like the one discussed in class, in which there is a fifty-fifty chance that a stock pays a dividend of $4 or $14 at the end of each of ten periods. Every subject has the same information about dividends and knows that everyone else has this information.

29. The experiment can be thought of as a study of…

    A. mean reversion.
    B. status quo bias.
    C. informational efficiency.
    D. popular models.
    E. private information equilibrium.

30. It is assumed for the experiment that subjects are risk neutral and that the time value of money is irrelevant. If instead time value matters, …

    A. a bubble should occur.
    B. the price should rise or fall depending on whether the most recent dividend paid is high or low.
    C. the price should be lowest during the first two or three periods
    D. the price in any period should be the sum of expected dividends.
    E. the price in any period should be less than the sum of expected dividends.

31. What is the equilibrium price that economic theory predicts for period 5?

    A. $42
    B. $48
    C. $54
    D. $63
    E. $71

32. Suppose that at the beginning of period 6 it is announced that the distribution of future dividends will be changed to $2 and $16 for the remainder of the session. What should happen to the price of the stock given the assumptions of the experiment?

    A. Fall
    B. Rise
    C. Nothing given risk neutrality
    D. Nothing given time value irrelevance
    E. Nothing because no one is paying attention

PART 7

A couple of quick calculations.

33. Your friend says that she will triple your money in 10 years if you place an investment with her (no relation to Earl Jones). Your best alternative is to earn 11% compounded annually. What should you do?

    A. Invest with your friend

    B. Invest at 11%

34. Your first year of university is coming up soon, and you figure you'll need $41,000 for tuition and living expenses (obviously this is not Quebec). No problem, you landed a unionized job driving a forklift at Loblaw's frozen food warehouse. How much will you have to earn to cover your schooling if your marginal income tax rate is 20%?

    A. $20,000

    B. $41,700

    C. $50,400

    D. $51,250

    E. $52,500

PART 8

35. Kahneman, Knetsch, and Thaler argue that both the endowment effect and the status quo bias are the result of an asymmetry in valuation due to…

    A. the Holiday effect.
    B. shortage illusion.
    C. loss aversion.
    D. an Impressario effect.
    E. decorative lighting effects.

36. In their study of mean reversion, Werner De Bondt and Richard Thaler suggest that contrarian strategies may be successful because…

    A. of shortage illusion.
    B. of the Weekend effect.
    C. the returns on small firms are negatively serially correlated.
    D. investors overreact to recent information in making their forecasts.
    E. loser firms are simply those that have become riskier so their returns are pushed up.

37. Colin Camerer and Ernst Fehr suggest that stock markets are comparatively poor predictors of value because they encourage investor strategies that are…

    A. cooperative.
    B. reciprocating.
    C. Nash.
    D. substitutes.
    E. complements.

38. A possible explanation for what sustains a housing bubble, according to Robert Shiller, is…

    A. a common belief that the particular region is a good place to live.
    B. a common belief that interest rates will remain low.
    C. status quo bias.
    D. shortage illusion.
    E. a sale at Home Depot.

39. What is the January effect?

    A. A stock price anomaly that can be explained entirely by tax-loss selling
    B. A stock price anomaly that is the result of status quo bias
    C. An anomaly in which stock returns are lower on average in January than other months
    D. An anomaly in which stock returns are higher on average in January than other months
    E. The month when Simon's has its best sales

40. Alvin Roth, in explaining the art of designing markets, refers to a thick market as one…

    A. in which it is difficult to compute present values.
    B. that has many potential buyers and sellers whose offers can be matched.
    C. in which participants don't have to worry about disclosing their valuations.
    D. that is congested with buyers and sellers and therefore does not function well.
    E. in which kidneys are be traded online.

ROUGH WORK HERE

Optional explanations here