

UNIVERSITY OF TORONTO
RSM 222 H1S
MIDTERM EXAM, Winter 2011

Instructions:

DURATION: 1 hour 50 minutes

AID ALLOWED: Non-programmable calculator. Programmable calculators have to be reset before the exam.

Total marks on the exam are 100 allocated as follows:

Section		Marks Achieved
I	9 Multiple Choice Questions 3 marks each for a total of 27 marks	
II	Short Answer Questions 18 marks	
III	Problem 1: Job Costing 13 Marks	
	Problem 2: Process Costing 12 marks	
	Problem 3: CVP Problem 15 marks	
	Problem 4: ABC Problem 15 marks	
Totals	100 marks possible	

Your Signature

First Name

Last Name (Printed)

Your Student Number (Printed)

Your Class Time (Printed)

Section I: 9 Multiple Choice Questions (3 marks each, 27 marks in total) :

Please circle the single best answer for the multiple-choice questions.

1. Which of the following items would be included as part of factory overhead in a microcomputer manufacturer?

- a. the cost of memory chips
- b. wage of computer assemblers
- c. depreciation of computer assemblers
- d. salary of marketing director
- e. all of the above

2. Inventoriable costs

- a. include only the prime costs of manufacturing a product.
- b. include only the conversion costs of manufacturing a product.
- c. are expensed when products become part of finished goods inventory.
- d. are regarded as assets before the products are sold.
- e. None of the above.

3. Once the break-even point is reached

- a. the total contribution margin changes from negative to positive.
- b. net income will increase by the unit contribution margin for each item sold.
- c. variable costs will remain constant in total.
- d. the contribution margin ratio begins to decrease.
- e. None of the above

4. Miller manufactures desks. During the most productive month of the year, 3,500 desks are manufactured at a total cost of \$84,400. In its slowest month, Miller makes 1,100 desks at a cost of \$46,000. February is a regular month. Miller plans to make 2,000 units. What is the total variable costs for February?
- \$60,400
 - \$55,240
 - \$48,230
 - \$32,000
 - None of the above.
5. Winsor Inc. has planned to increase factory manager salary by 10%. If selling prices and all other cost are held constant, the break-even point
- decreases at rate higher than 10%.
 - decreases at a rate lower than 10%.
 - increases at rate higher than 10%.
 - increases at a rate lower than 10%.
 - None of the above.
6. The following information relates to Glow Ltd.

Sales	\$125,000
Cost of goods sold	56,000
Operating expenses	25,500
Finished goods, beginning inventory	15,000
Finished goods, ending inventory	15,000
Direct material	10,500
Direct labour	19,000
Overhead	25,000

What is Glow's cost of goods manufactured?

- \$29,500
- \$50,500
- \$54,500
- \$61,500
- None of the above

7. Activity based costing may be used in which of the following scenarios?

- a. For selling and administrative expenses.
- b. For service related business.
- c. Both a and b.
- d. Nether a nor b.

8. The process of choosing among competing alternatives is called

- a. controlling
- b. decision making
- c. planning
- d. performance evaluation
- e. None of the above.

9. Which of the following statement is true?

- I. A cost driver is a factor that causally affects costs.
 - II. A cost hierarchy is a categorization of costs into different cost pools on the basis of the different types of cost drivers or different degrees of difficulty in determining cause-and-effect relationships.
- a. Only I
 - b. Only II
 - c. Both I and II
 - d. Neither I nor II

2. DEF company has the following cost data for 2010. The data is collected before the disposition of under- or over-applied overhead.

Work in Process Inventory	\$60,000
Finished Goods Inventory	\$80,000
Cost of Goods Sold	\$200,000
Actual overhead	\$150,000
Applied overhead	\$130,000

- a. (2 marks) How much is the under-applied or over-applied overhead for 2010?
- b. (4 marks) Assume that the amount is significant, prepare the journal entry to dispose of the amount.
3. (4 marks) Provide two reasons why overhead might be under-applied/over-applied for DEF company in 2010.

Section III. 4 Problems (55 Marks)

1. Job Costing (13 marks)

Orange Inc. is a manufacturing firm that uses normal job-order costing. On January 1, the beginning of its fiscal year, the company had the following inventory balances: Raw material \$ 20,000; Work in process \$25,000; Finished goods \$30,000.

The company applies overhead cost to jobs on the basis of machine hours worked. For the current year, the company estimated that it would work 75,000 machine hours and incur \$450,000 in manufacturing overhead cost. The following transactions were recorded for the year:

1. Raw materials were purchased on account, \$410,000.
2. Raw materials were requisitioned for use in production, \$380,000 (\$360,000 direct materials and \$20,000 indirect materials).
3. The following costs were incurred for employee services: direct labor, \$75,000; indirect labor, \$110,000; sales commissions, \$90,000; and administrative salaries, \$200,000.
4. Sales travel costs were \$17,000.
5. Utility costs in the factory were \$43,000.
6. Advertising costs were \$180,000
7. Depreciation was recorded for the year, \$350,000 (80% relates to factory operations, and 20% relates to selling and administrative activities).
8. Insurance expired during the year, 10,000 (70% related to factory operations, and the remaining 30% relates to selling and administrative activities).
9. Manufacturing overhead was applied to productions. Due to lower than expected demand for its products, the company worked 70,000 machine-hours during the year.
10. Goods costing \$880,000 to manufacture according to their job cost sheets were completed during the year

Required (A - C): (Show your calculation using T-Account)

- A) (6 marks) Determine the amount of over- or under-applied overhead for the year
- B) (4 marks) Determine the ending inventory balance of work-in-process.
- C) (3 marks) Determine the amount of Selling, General & Administrative Costs for the year.

2. Process Costing (12 Marks)

Halifax Salt company process salt and accounts for production using weighted average process costing method. Direct material is added at the start of production but labour and overhead costs are incurred evenly throughout. The following data pertain to operations for February:

Beginning WIP (75% complete)	8,000 kg
Started in February	200,000 kg
Ending WIP (25% complete)	20,000 kg

The cost information is provided below:

	Direct material	Conversion
Beginning WIP	\$4,000	\$2,282
Incurred in February	\$48,000	\$20,878

Required:

Calculate the cost transferred out to finished goods inventory and the value of the ending WIP.

4. ABC Problem (15 Marks)

The River Company manufactures a variety of prestige boardroom chairs. Its job-costing system uses an activity based approach. There are two direct cost categories (direct materials and direct labour) and three indirect cost pools. The cost pools represent the following three activities.

Activities	Budgeted costs for 2011	Cost driver used as allocation base	Cost allocation rate
Materials handling	\$200,000	Parts	\$0.25
Cutting	2,000,000	Parts	2.50
Assembly	2,000,000	Direct labour hours	25.00

Two styles of chairs were produced in February, 2011, the executive chair and the chairman chair. Their quantities, direct material costs, and other data for February are as follows:

	Units produced	Direct material costs	Number of parts	Direct labour hours
Executive Chair	5,000	\$600,000	100,000	7,500
Chairman Chair	100	25,000	3,500	500

The upstream activities to manufacturing (R&D and design) and downstream activities (marketing, distribution, and customer service) are analyzed, and the unit costs for these activities are:

	Upstream Activities	Downstream Activities
Executive Chair	\$60	\$110
Chairman Chair	146	236

The direct manufacturing labour rate is \$20 per hour. Assume no beginning or ending inventory.

Required:

- 1) Compute the unit manufacturing costs of the executive chair and the chairman chair.

- 2) The company sells the executive chair at the price \$500 and the chairman chair at the price \$1,200. What is the profit for the company in February?

----- **End of the Exam** -----