

Student Name _____

ID# _____

COURSE: ACCO 330/4 SECTION BB; SECTION D; SECTION E; and SECTION F			
EXAMINATION: Midterm EXAM	DATE: Sunday, February 10, 2008	TIME: 9:00 – 12:00	# OF PAGES: 13 (including cover page)
INSTRUCTORS: Professor G. Chan, Dr. S. Mustafa, and Professor L. Tenenbaum			
MATERIALS ALLOWED: 1) ENGLISH LANGUAGE / OTHER LANGUAGE DICTIONARY 2) NON-PROGRAMMABLE CALCULATOR - MAY <u>NOT</u> BE SHARED			
SPECIAL INSTRUCTIONS: READ THE INSTRUCTIONS BELOW			

INSTRUCTIONS

1. ANSWER ALL QUESTIONS IN THE ANSWER BOOKLET THAT HAS BEEN PROVIDED TO YOU.
2. BE SURE TO RETURN THE EXAM PAPER ALONG WITH THE ANSWER BOOKLET AT THE END OF THE EXAM.
3. ANY STUDENT WHO FAILS TO RETURN THE ENTIRE EXAM PAPER ALONG WITH THE ANSWER BOOKLET(S) WILL BE REPORTED FOR CHEATING.
4. DO NOT TEAR YOUR EXAM PAPER OR YOUR ANSWER BOOKLET(S).
5. BE SURE TO PUT YOUR NAME AND STUDENT I.D. NUMBER ON THE EXAM PAPER AND THE ANSWER BOOKLET.
6. START EACH QUESTION ON A NEW PAGE IN THE ANSWER BOOKLET.
7. IT IS VERY IMPORTANT TO WRITE THE NAME OF YOUR INSTRUCTOR AND SECTION LETTER/NUMBER ON YOUR ANSWER BOOKLET(S).

Good Luck!

Choose the **Best** answer of the following multiple-choice questions. Write your answers on the **FRONT PAGE** of the **ANSWER BOOKLET**.

1. Which of the following is not a typical component of a flexible manufacturing system (FMS)?

- A) Computerized network.
- B) Automated equipment.
- C) Robots.
- D) Reengineering.
- E) Stand-alone, computer-controlled machines.

(1 mark)

2. Which of following statements is/are true concerning strategic positioning?

- A) Once a firm has chosen a position, it is unwise to change it, even though the company or business environment might change.
- B) If a firm does decide to compete on more than one strategic position, it runs the risk of getting "stuck in the middle" between the various positions.
- C) Since the business environment is always changing, rather than stick constantly with one strategic position, firms should pay close attention during times of change, and adjust their strategies accordingly.
- D) Answers A and C are both true.
- E) Answers B and C are both true.

(1 mark)

3. With regard to critical success factors, which one of the following would not be considered a financial measure of success?

- A) Cash Flow.
- B) Brand Growth.
- C) Sales Growth.
- D) Earnings Growth.
- E) Dividend Growth.

(1 mark)

4. Which one of the following is not usually included in the balanced scorecard as a group of CSFs?

- A) Financial Performance.
- B) Competitive Strategy.
- C) Learning and Innovation.
- D) Customer Satisfaction.
- E) Internal Business Processes.

(1 mark)

5. Which of the following describes the type of information that cost management must provide that is not provided by traditional cost accounting systems?

- A) Information of a record keeping nature.
- B) Reported financial information.
- C) Reported nonfinancial information.
- D) Information that addresses the strategic objectives of the firm.
- E) Long-term planning information.

(1 mark)

6. Which of the following would not be a possible perspective of a Balanced Scorecard in a strategy map?
- A) Learning and Innovation.
 - B) Internal Processes.
 - C) Financial Performance.
 - D) Customer.
 - E) None of the above.
- (1 mark)**
7. Variable costs within the relevant range for a firm are assumed:
- A) Not to vary per unit.
 - B) Not to vary in total.
 - C) To be nonlinear.
 - D) To be curvilinear.
 - E) Both answer A and answer C are correct.
- (1 mark)**
8. How will unit (or average) cost of manufacturing (materials, labor and overhead) usually change if the production level rises?
- A) It will remain constant.
 - B) It will increase in direct proportion to the production increase.
 - C) It will increase, but inversely with the production increase.
 - D) It will decrease inversely and in direct proportion to the production increases.
 - E) It will decrease, but not in direct proportion to the production increase.
- (1 mark)**
9. Which of the following provides a timely estimate of the cost of producing each batch of product?
- A) Actual costing system.
 - B) Standard costing system.
 - C) Normal costing system.
 - D) Industry costing system.
 - E) None of the above.
- (1 mark)**
10. From the industries listed below, which one is most likely to use process costing in accounting for production costs?
- A) Printing shop.
 - B) Accounting firm.
 - C) Electrical contractor.
 - D) Steel mill.
 - E) Automobile repair shop.
- (1 mark)**

The following information pertains to questions 11 to 15:

The assembly department of ABC, Inc. uses weighted average process costing method. It began the month of January 2008 with 8,000 units in beginning work-in-process, which were 75% complete. During the period, work was begun on an additional 45,000 units. Direct materials are added when the goods are 50% complete, labor is added when the units are 30% complete and overhead is incurred uniformly. Units are inspected for rework when they are 70% complete. Rejected units are returned to 40% complete point for rework. Normal rework is 2 percent of the units surviving inspection. During the period, 42,000 units were inspected for rework. An inspection for spoilage occurs when the units are 80% complete. Normal spoilage is 1 percent of units inspected. This period, 600 units were spoiled. Ending work-in-process on January 31st, consisted of 4,000 units, 25% complete.

11. The number of equivalent units of direct material in normal spoilage was:

- A) 400
- B) 490
- C) 0
- D) 500
- E) None of the above. **(1 mark)**

12. The number of equivalent units of overhead in normal spoilage was:

- A) 392
- B) 400
- C) 380
- D) 0
- E) None of the above. **(1 mark)**

13. The number of equivalent units of direct labor in normal rework was:

- A) 1,000
- B) 0
- C) 950
- D) 820
- E) None of the above. **(1 mark)**

14. The number of equivalent units of overhead in normal rework was:

- A) 250
- B) 325.50
- C) 246
- D) 0
- E) None of the above. **(1 mark)**

15. The number of equivalent units of direct labor in abnormal spoilage was:

- A) 0
- B) 110
- C) 100
- D) 75
- E) None of the above. **(1 mark)**

16. The accounts at year end of Hippo Manufacturing contained the following items:

- Finished goods (FG) had one completed job that had not been sent out to the customer. The total cost of \$280,000 for this job included \$48,000 in current applied manufacturing overhead.
- Work-in-process (WIP) inventory had a balance of \$750,000, which included \$92,000 in current applied manufacturing overhead.
- Cost of goods sold (CGS) for the year was \$3,070,000, of which \$460,000 is current applied manufacturing overhead.
- The manufacturing overhead account had a debit balance of \$300,000 remaining after overhead had been applied using the predetermined overhead rate.

What is the *most* accurate disposition of the remaining balance in the manufacturing overhead account? (Consider the overhead variance amount to be significant)

- A) To debit work-in-process inventory by \$46,000, debit finished goods inventory by \$24,000, and debit cost of goods sold by \$230,000.
- B) To debit cost of goods sold by \$300,000.
- C) To debit work-in-process inventory by \$75,000, debit finished goods inventory by \$75,000, and debit cost of goods sold by \$75,000.
- D) To credit work-in-process inventory by \$46,000, credit finished goods inventory by \$24,000, and credit cost of goods sold by \$230,000.
- E) None of the above.

(1 mark)

Use the following information to answer questions 17 and 18

Last month, the painting department of Surfaces Company started 20,000 units into production. The department had 6,000 units in process at the beginning of the month and these were 30% complete with respect to conversion costs. There were 8,000 units in process at the end of the month, which were 40% complete with respect to conversion costs. A total of 18,000 units were completed and transferred to the next department during the month.

17. Under the weighted-average method, what would the equivalent units of production for conversion costs for the month be?

- A) 18,800
- B) 21,000
- C) 21,200
- D) 23,000
- E) None of the above.

(1 mark)

18. Under the FIFO method, what would the equivalent units of production for conversion costs for the month be?

- A) 16,200
- B) 19,400
- C) 21,000
- D) 21,400
- E) None of the above.

(1.5 mark)

19. The following information is available for the manufacturing operations of ABC Ltd. for the month of March:

Direct materials purchased	\$82,000
Direct labour payroll	\$60,000
Direct labour rate per hour	\$15.00
Factory overhead rate per direct labour hour	\$10.00

	<u>Opening Inventory</u> <u>March 1</u>	<u>Ending Inventory</u> <u>March 31</u>
Direct materials	\$30,000	\$37,000
Work in process	\$12,000	\$18,000
Finished goods	\$72,000	\$93,000

Cost of goods available for sale for the month of March is

- A) \$241,000.
- B) \$169,000.
- C) \$148,000.
- D) \$187,000.
- E) \$175,000.

(1.5 mark)

20. Company F has two production departments, A and B, and two service departments, janitorial and personnel. Personnel costs are allocated based on number of employees and janitorial costs are allocated based on size of the department in square meters.

Departments	No. of Employees	Sq. Meters	Direct Costs
A	150	10,000	\$ 750,000
B	200	20,000	600,000
Janitorial	25	1,000	25,000
Personnel	<u>15</u>	<u>2,000</u>	<u>18,000</u>
Total	390	33,000	\$1,393,000

Under the reciprocal allocation method, what amount of personnel costs would be allocated to Department B (round to the nearest dollar)?

- A) \$7,585
- B) \$8,733
- C) \$9,866
- D) \$10,477
- E) None of the above

(2 marks)

Use the following information to answer questions 21 and 22.

The Rest-a-Lot chair company manufactures a standard recliner. During February, the firm's Assembly Department started production of 75,000 chairs. During the month, the firm completed 80,000 chairs, and transferred them to the Finishing Department. The firm ended the month with 10,000 chairs in ending inventory. There were 15,000 chairs in beginning inventory. All direct materials costs are added at the beginning of the production cycle and conversion costs are added uniformly throughout the production process. The FIFO method of process costing is used by Rest-a-Lot. Beginning work in process was 30% complete as to conversion costs, while ending work in process was 80% complete as to conversion costs.

Beginning inventory:

Direct materials	\$24,000
Conversion costs	\$35,000

Manufacturing costs added during the accounting period:

Direct materials	\$168,000
Conversion costs	\$278,000

21. What is the amount of direct materials cost assigned to ending work-in-process inventory at the end of February?

- A) \$22,400
- B) \$19,200
- C) \$22,500
- D) \$25,600
- E) None of the above

(2 marks)

22. What is the cost of the goods transferred out during February?

- A) \$417,750
- B) \$505,000
- C) \$476,750
- D) \$455,968
- E) None of the above

(2 marks)

The following information pertains to questions 23 and 24.

Ex Company, which produces a single product began operations on January 1, Year 1. Material A is added at the start of the production process and packaging material B is added at the very end of the process. Conversion costs are incurred uniformly throughout the process. Inspection takes place when manufacturing is completed, but before packaging material B is added. Spoiled units are discarded. Normal spoilage for this production process is 4% of good output. Production data for the first quarter of Year 1 was as follows:

Units started	18,000 units
Good units completed and transferred-out	15,000 units
Ending work-in-process inventory	2,000 units

Using a weighted average process costing system, Ex Company incurred the following costs per equivalent unit during the first quarter:

Material A	\$11.00
Material B	\$0.80
Conversion costs	\$15.00

The cost: of ending work-in-process inventory using weighted average process costing was \$34,000.

23. The loss from abnormal spoilage for the first quarter was

- A) \$16,080.
- B) \$10,720.
- C) \$10,400.
- D) \$15,600.
- E) \$26,800.

(2 marks)

24. In terms of conversion, what was the percentage of completion of the ending work-in-process inventory?

- A) 65.4%
- B) 34.7%
- C) 54.5%
- D) 40.0%
- E) 63.4%

(2 marks)

Question 2 (20-25 minutes)

(15 marks)

The XYZ Manufacturing Company has three service departments and two producing departments. They are currently evaluating several methods of allocating the service the service departments' budgeted costs to producing departments. Accordingly, the following information has been prepared for the month of January, 2009:

	Total Costs Service Departments			Factory Overhead Costs Producing Departments	
	Utilities	Maintenance	Personnel	Machining	Assembly
Budgeted costs	\$800,000	\$650,000	\$400,000	\$1,230,000	\$370,000
Kilowatt hours (kwh)	800 kwh	1,200 kwh	500 kwh	33,300 kwh	35,000 kwh
Square meters (sqm)	1,000 sqm	1,000 sqm	1,000 sqm	40,000 sqm	5,000 sqm
Number of employees (ppl)	12 ppl	21 ppl	15 ppl	147 ppl	20 ppl
Machine hours (MH)				500,000 MH	10,000 MH
Direct labor hours (DLH)				250,000 DLH	60,000 DLH

Assume that the cost drivers for each department are as follows:

Utilities Department	Kilowatt (kwh)
Maintenance Department	Square meters (sqm)
Personnel Department	Number of employees (ppl)
Machining Department	Machine hours (MH)
Assembly Department	Direct labor hours (DLH)

Required:

a. Assume Utilities is allocated first, then Maintenance, and finally Personnel. Indicate the **proportions** (in **numerical fractions** for example, 3/5, 9/19, 35/100...etc.) in which service departments' costs will be allocated to *all* various departments using the:

1. Direct method
2. Step method

(7.5 marks)

b. Using the step method determine the factory overhead application rates for the producing departments.

(7.5 marks)

Question 3 (25-30 minutes)

(15 marks)

Autopaint Inc. manufactures premium paint for automobiles. The company mainly sells its product to local auto repair shops. Currently, the company's employees are unionized except for the management. In order to improve profitability, the company is considering increasing the use of technology, and so reducing labor. However, the union is against the reduction in labor, since most of the expected laid off employees would end up out of jobs.

The production of paint takes place in a single semiautomatic process. The manufacturing process starts with Chemical X at the very beginning. The direct labor is incurred uniformly when the units reach the 20% completion stage and continues until they reach the 70% completion stage. In addition, two more chemicals are added to the production, Chemical Y is added when the units are 50% completed, and finally Chemical Z, which consists of different colors, is added when the units are 90% completed. The overhead costs are incurred uniformly throughout the entire process.

SUMMARY DATA FOR THE MONTH OF OCTOBER 2006

WIP beginning inventory (30% complete)	3,000 Units
Started during March <i>October</i>	40,000 Units
WIP ending inventory (65% complete)	2,000 Units
WIP beginning inventory costs:	
Chemical X	\$5,000
Direct labor	\$2,226
Overhead	\$1,650
Costs added during October, 2006	
Chemical X	\$38,000
Chemical Y	\$38,700
Chemical Z	\$21,320
Direct labor	\$18,146
Overhead	\$20,286

Required Provide all necessary schedules to support your computations.

Assume there is no spoilage and the company uses the **FIFO** method. For the month of October 2006, determine the cost per equivalent unit of each manufacturing cost element (i.e., Chemical X, Chemical Y, Chemical Z, Direct labor, and Overhead). **(15 marks)**

Question 4 (30-35 minutes)**(20 marks)**

Rockingham Manufacturing Company builds highly sophisticated engine parts for cars competing in stock racing and drag racing. The company uses a normal costing system that applies factory overhead on the basis of direct labor-hours. For 2004, the company estimated that it would incur \$256,000 in factory overhead costs and 16,000 direct labor-hours. The April 1, 2004, balance in inventory accounts follow:

Material Inventory	\$ 54,000
Work-in-Process Inventory (Y12)	\$ 21,000
Finished Goods Inventory (Z11)	\$108,000

Job Y12 is the only job in process on April 1, 2004. The following transactions were recorded for the month of April

- (a). Purchased materials on account, \$180,000
 (b). Issued \$182,000 of materials to production, \$8,000 of which was for indirect materials. Cost of direct materials issued

Job Y12	\$46,000
Job D20	\$84,000
Job E33	\$44,000

- (c). Incurred and paid payroll cost of \$40,920. Direct labor cost (\$20/hour; total 1,196 hours)

Job Y12	\$12,220
Job D20	\$ 8,060
Job E33	\$ 3,640
Indirect labor	\$ 5,000
Selling and administrative salaries	\$12,000

- (d). Recognize depreciation for the month:

Manufacturing asset	\$ 4,400
Selling and administrative asset	\$ 3,400

- (e). Paid advertising expenses \$12,000
 (f). Incurred factory utility costs \$ 2,600
 (g). Incurred other factory overhead costs \$3,200
 (h). Applied factory overhead to production on the basis of direct labor-hours
 (i). Job Y12 had a normal spoilage with the estimated cost of \$2,000 that was sold for \$500 cash in April attributable to this particular job.
 (j). Job D20 had a normal spoilage with the estimated cost of \$300 from the general production process failure and abnormal spoilage of \$100.
 (k). The company incurred scrap specifically due to Job E33 and sold it for \$60 cash.
 (l). The company sold the scrap common to all jobs for \$110 cash in April.
 (m). Completed Job Y12 during the month and transferred it to the finished goods' warehouse.
 (n). Sold Job Z11 on account for \$148,000.
 (o). Received \$50,000 of collections on account from customers during the month.

Question 4 (continued)**(20 marks)****Required**

- a. Prepare the journal entries for the *selected* transactions: (i), (j), (k), and (l), indicating amounts for each job separately (i.e., work-in-process-Job Y12, work-in-process-Job D20, or work-in-process-Job E33.) **(5 marks)**
- b. Supply all the missing amounts from (A) to (L) below, in order to complete the simple job-cost sheets for the month ended April 30th, 2004. Indicate whether the amounts should be added (+) or deducted (-).

Job Cost Sheets for the month ended April. 30th, 2004

	Job Y12	Job D20	Job E33
Beginning work-in-process	\$21,000	-0-	-0-
Direct Materials	\$46,000	\$84,000	\$44,000
Direct Labor	\$12,220	\$8,060	\$3,640
Overhead Applied	(A)	(B)	(C)
Normal Spoilage	(D)	(E)	(F)
Abnormal Spoilage	(G)	(H)	(I)
<u>Salvage / Scrap</u>	(J) _____	(K) _____	(L) _____
Total Cost	-?-	-?-	-?-

(6 marks)

- c. What was the amount of underapplied or overapplied factory overhead? **(3 marks)**
- d. Prepare the appropriate journal entry to close out the factory overhead account at the end of April, 2004. Assume that the amount of overapplied or underapplied factory overhead is considered significant and should be closed at the end of each month. **(3 marks)**
- e. Calculate the net income for the month ended April 30th, 2004. **(3 marks)**

Question 5 (30-35 minutes)

(20 marks)

Speedo Company manufactures various lines of bicycles. Because of the high volume of each type of product, the company employs a process cost system using the weighted average method to determine unit costs. Bicycle parts are manufactured in the Molding Department and transferred to the Assembly Department where they are partially assembled. After assembly the bicycle is sent to the Packing Department.

The month of January, 2008 cost and production figures for the Assembly Department are:

	Transferred in From Molding Department	Assembly Material	Assembly Conversion Cost
Costs as of January 1 st	\$70,000.00	\$6,495.00	\$11,868.75
Costs added during January	1,130,000.00	96,840.00	236,590.00

The Assembly Department began the month of January, 2008 with 3,000 units in the beginning inventory, 50% complete. It received 45,000 units from the Molding Department, and ended the month of January with 4,000 bicycles, 20% complete. Seats are considered the only Assembly material and are added when bicycles reach 75% stage of completion. Conversion costs are incurred uniformly throughout the process.

Spoiled bicycles are identified at an inspection point when the assembly process is 70% complete. The normal rejection percentage for spoiled bicycles is 5% of the units surviving the inspection. Any spoiled bicycles over and above the 5% quota are considered as abnormal. Total number of bicycles spoiled in January was 4,000. Spoiled units are sold for cash at \$5 per unit by the end of the month. Another inspection to detect defective bicycles takes place at 96% stage of completion. Defective units are taken back to the 71% completion stage in the assembly process. Total number of units inspected at 96% completion stage was 41,500. Normal rework is considered 2% of units surviving the inspection.

Required: Provide all necessary schedules to support your computations.

For the month ended January 31st, 2008, determine the cost of bicycles transferred out from the Assembly Department into the Packing Department. **(20 marks)**