# ACCT 226 Managerial Accounting USC Upstate - JCBE Exam 2 March, 2013 Albrecht

Distributed reading: Benefits and costs of quality					
	Q1	Definitions	6 min	8 pts	
<u>Chapt</u>	er 2:				
	Q2	Definitions @ 3-4 minutes each	6 min	6 pts	
	Q3	Costing for jobs	20 min	28 pts	
	Q4	Overhead applied	<u>5 min</u>	6 pts	
			31 min	40 pts	
<b>Chapt</b>					
	Q5	Basic CVP with cm/unit	15 min	22 pts	
	Q6	CVP for alternate cost structures	8 min	10 pts	
	Q7	Complex CVP	8 min	10 pts	
			31 min	42 pts	
Total			68 min	86 pts	

#### **Instructions:**

- 1. Budget your time wisely. This exam should take about 68 minutes to complete. You have 85 total minutes to work the test: 12:10 to 1:35.
- 2. Show all work and computations. Incorrect answers that are accompanied by computations are eligible for partial credit. Incorrect answers that are not accompanied by computations are not eligible for partial credit.
- 3. You may use a calculator and a straight-edge. You may not use your text or any notes. **This** exam is closed-book, closed-notes, and closed-neighbor.
- 4. **Please do not cheat**. An exam is not important enough to compromise your honor. Anyone caught cheating will be severely disciplined according to school policy.
- 5. Dr. Albrecht believes that each question has sufficient information to be worked.
- 6. Good luck.

# **Useful Equations**

<u>Traditional statement</u> <u>Contribution margin statement</u>

Sales revenue Sales revenue

<u>- Cost of Goods Sold</u> <u>- Variable costs</u>

Gross Margin Contribution margin

-Selling, General & Admin - Fixed costs

Income Income

Sales rev Beg FG Beg WIP Beg Mat

 - CGS
 + CGM
 + DM used
 + Mat Purchases

 GM
 - End FG
 + DL
 - End Mat

 - S&A
 CGS
 + MOH
 DM used

CGM

Total Revenue - Total Variable Cost - Total Fixed Cost = Income

Units:  $(SP - V)*X - F = \pi$  X = number of units

 $CM*X - F = \pi$ 

 $CM*\Delta X = \Delta \pi$ 

Sales Revenue:  $(100\% - V\%)*R - F = \pi$  R = Sales revenue

 $CM\%*R - F = \pi$ 

 $CM\%*_{\triangle}R = _{\triangle}\pi$ 

**Question 1** For each of the following terms, please provide (1) clear, precise definitions, and (2) a good example. You are trying to convince me that you truly know and understand what these terms mean. Plan on spending no more than five minutes each. Place your answers in the space provided below and on the reverse side of this page.

Appraisal cost External failure cost **Question 2** For each of the following terms, please provide (1) clear, precise definitions, and (2) a good example of its use. You are trying to convince me that you truly know and understand what these terms mean. Plan on spending no more than five minutes each. Place your answers in the space provided below and on the reverse side of this page.

Beginning work in process Cost of goods manufactured

**Question 3** Information for the Veronica job-order system.

Job	Started	Costs Sept	DM Oct	DL Oct	OH Oct	Completed	When sold
A	Oct 17	\$0	\$400	\$700	\$850	Nov 14	Sold in December, \$4,750
B C	Oct 17 Oct 23	\$0 \$0	\$1,200 \$600	\$250 \$800	\$420 \$400	Oct 21	Sold in October, \$2,600
D	Sept 3	\$610	\$000 \$0	\$800 \$0	\$400 \$0	Nov 15 Sept 9	Sold in November, \$1,900 Sold in November, \$1,200
E	Oct 11	\$0	\$800	\$435	\$725	Oct 19	Sold in October, \$4,700
F	Sept 5	\$110	\$0	\$0	\$0	Sept 13	Sold in Sept, \$400
G	Oct 4	\$0	\$560	\$430	\$880	Oct 21	Sold in November, \$4,500
H	Oct 12	0	\$500	\$400	\$60	Oct 21	Sold in October, \$1,250
I	Sept 8	\$900	\$0	\$0	\$0	Sept 17	Sold in October, \$1,700
J	Sept 7	\$410	\$210	\$470	\$690	Nov 19	Sold in November, \$6,800
K	Sept 19	\$250	\$570	\$350	\$670	Oct 3	Sold in October, \$1,950

Overhead costs incurred (actual) during October are \$4,870.

**Required:** Identify the jobs associated with each of the following, and compute the costs for: Identify the jobs associated with each of the following, and compute the costs for:

Work-in-process, October 1  Jobs:	Costs:	
Work-in-process, October 31 Jobs:	Costs:	
Finished goods, October 1 Jobs:	Costs:	
Finished goods, October 31  Jobs:	Costs:	

Cost of goods	Cost of goods manufactured (CGM), October [Show all work]  Jobs:				
	Compute CGM	Compute CGM a second way:			
Cost of goods sold unadjusted (CGS), October [Show all work]  Jobs:					
	Compute CGS:	Compute CGS a second way:			
Amount of over- or under-applied overhead (designate over or under)					
Gross Margin, Octobe	er				

**Question 4** The Xiao Company applies overhead to jobs on the basis of machine hours. The following information is available.

Estimated overhead before period starts \$90,000
Actual machine hours during the period 10,000
Actual overhead accumulated by the period end \$60,000
Estimated machine hours before period starts 15.000

# Required:

1. What is the *predetermined* overhead rate?

2. How much overhead is applied to jobs for the period at the Xiao Company?

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**Question 5** Alex Company produces and sells MP3 players. It projects the following revenue and costs for production and sales:

Sales price \$70 per unit
Fixed production cost \$136,000 total
Fixed selling cost \$84,000 total
Variable production cost
Variable selling cost \$11 per unit

### **Required:**

- (1) What is profit/loss at 36,000 units? *Prepare a contribution margin income statement to prove your answer. Also prepare a traditional income statement to prove your answer.*
- (2) What is the break even point in units for Alex's MP3 players?
- (3) How many MP3 players in total are needed to generate a profit of \$60,000? *Prepare a contribution margin income statement to prove your answer*.
- (4) How many units must be produced and sold to generate a profit of 10% of total sales revenue? How much is this profit?
- (5) By how much does profit change going from 50,000 units to 55,000 units?

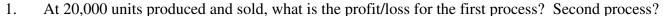
Clearly mark your answers with a circled number, ①, ②, ③, ④, or ⑤ based on which part of the question the answer is for.

### **Question 6** CVP Analysis–computing an indifference point

The Savannah Company is contemplating making and selling a new product. Savannah can apply two different production processes, and needs you to analyze the costs and profits over different activity levels. Under either process, the selling price for the product is \$40 per unit.

The first process requires fixed costs of \$192,000 and variable costs of \$24 per unit. The second process requires fixed costs of \$997,000 and variable costs of \$10 per unit.

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2. At what number of units is the company indifferent between the two methods (i.e., the profit is the same)? Prepare an income statement for each process at this number of units.

**Question 7** At 80,000 units, the Eliza Company loses \$60,000. At 160,000 units, the Eliza Company makes a profit of \$100,000. At 180,000 units, the Eliza Company makes a profit of \$140,000.

## Required:

- 1. What is the contribution margin per unit?
- 2. What is the amount of total fixed costs?
- 3. What is the breakeven point in units?