## ACCT <br> Exam 2 <br> March, 2013 <br> Albrecht

226 Managerial Accounting

## Distributed reading: Benefits and costs of quality

Q1 Definitions 6 min 8 pts
Chapter 2: Accounting for Jobs
Q2 Definitions @ 3-4 minutes each
Q3 Costing for jobs
Q4 Overhead applied
Chapter 5: Cost-volume-profit (CVP)
Q5 Basic CVP with cm/unit
Q6 CVP for alternate cost structures
Q7 Complex CVP

Total

## 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

Traditional statement
Sales revenue

- Cost of Goods Sold

Gross Margin
-Selling, General \& Admin
Income

Sales rev

- CGS

GM

- S\&A

Income

Beg FG

+ CGM
- End FG

CGS

Contribution margin statement
Sales revenue

- Variable costs

Contribution margin

- Fixed costs

Income

+ DM used + Mat Purchases
$\begin{array}{ll}+ \text { DL } & - \text { End Mat } \\ + \text { MOH } & \text { DM used }\end{array}$
$\begin{array}{ll}+ \text { DL } & \quad-\text { End Mat } \\ +\mathrm{MOH} & \text { DM used }\end{array}$

Beg Mat

- End WIP

CGM

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

Units:

$$
\begin{array}{ll}
(\mathrm{SP}-\mathrm{V}) * \mathrm{X}-\mathrm{F}=\pi & \mathrm{X}=\text { number of units } \\
\mathrm{CM} * \mathrm{X}-\mathrm{F}=\pi & \\
\mathrm{CM}^{*} \Delta \mathrm{X}=\Delta \pi &
\end{array}
$$

Sales Revenue:

$$
\begin{gathered}
(100 \%-\mathrm{V} \%) * \mathrm{R}-\mathrm{F}=\pi \\
\mathrm{CM} \% * \mathrm{R}-\mathrm{F}=\pi \\
\mathrm{CM} \% * \Delta \mathrm{R}=\Delta \pi
\end{gathered}
$$

$$
\mathrm{R}=\text { Sales revenue }
$$

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 <br> Sept | DM <br> Oct | DL <br> Oct | OH <br> Oct | Completed | When sold |
| :--- | :--- | :--- | ---: | ---: | ---: | :--- | :--- |
| A | Oct 17 | $\$ 0$ | $\$ 400$ | $\$ 700$ | $\$ 850$ | Nov 14 | Sold in December, $\$ 4,750$ |
| B | Oct 17 | $\$ 0$ | $\$ 1,200$ | $\$ 250$ | $\$ 420$ | Oct 21 | Sold in October, $\$ 2,600$ |
| C | Oct 23 | $\$ 0$ | $\$ 600$ | $\$ 800$ | $\$ 400$ | Nov 15 | Sold in November, $\$ 1,900$ |
| D | Sept 3 | $\$ 610$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | Sept 9 | 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 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, October

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?

Question 5 Alex Company produces and sells MP3 players. It projects the following revenue and costs for production and sales:
Sales price $\quad \$ 70$ per unit

Fixed production cost $\$ 136,000$ total
Fixed selling cost $\quad \$ 84,000$ total
Variable production cost $\$ 19$ per unit
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.

## Required:

1. At 20,000 units produced and sold, what is the profit/loss for the first process? Second process?
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?
