

**Examination:** Management Accounting 11066

**Summer semester:** 2010

**Examiner:** Prof. Dr. Alfred Luhmer

**Duration:** 60 minutes

**Name:** \_\_\_\_\_ **Matriculation number:** \_\_\_\_\_

**The following aids can be used:** Calculator, English language dictionary

A total of 60 points can be achieved. You are advised to base your time allocation on the points indicated at the problems. Please answer each question in the space provided either immediately below the problem or on the next page. Additions written elsewhere will not be recognized. All of the following 5 problems are to be solved. Check whether you received the complete set of 6 pages with 5 problems.

**Problem 1 (10 points)**

Query Company sells pillows for \$25.00 each. The manufacturing cost, all variable, is \$10 per pillow. The company is planning on renting an exhibition booth for both display and selling purposes at the annual crafts and art convention. The convention coordinator allows three options for each participating company. They are:

1. paying a fixed booth fee of \$5,000, or
2. paying an \$4,000 fee plus 10% of revenue made at the convention, or
3. paying 20% of revenue made at the convention.

**Required:**

- a. Compute the breakeven sales in pillows of each option.
- b. Compute the sales levels at which Query would be indifferent between options 1 and 2, 2 and 3, 1 and 3, respectively. How do you interpret the result? (You might like to draw a picture.)

**Answer:**

**Problem 2 (15 points)**

Brilliant Accents Company manufactures and sells three styles of kitchen faucets: Brass, Chrome, and White. Production takes 25, 25, and 10 machine hours to manufacture 1,000-unit batches of brass, chrome and white faucets, respectively. The following additional data apply:

	<u>BRASS</u> #30,000	<u>CHROME</u> #50,000	<u>WHITE</u> #40,000
Projected sales in units			
<b><u>PER UNIT data:</u></b>			
Selling price	\$40	\$20	\$30
Direct materials	\$ 8	\$ 4	\$ 8
Direct labor	\$15	\$ 3	\$ 9
Overhead cost based on direct labor hours (traditional system)	\$12	\$ 3	\$ 9
<b><u>Hours per 1000-unit batch:</u></b>			
Direct labor hours	40	10	30
Machine hours	25	25	10
Setup hours	1.0	0.5	1.0
Inspection hours	30	20	20

Total overhead costs and activity levels for the year are estimated as follows:

<u>Activity</u>	<u>Overhead costs</u>	<u>Activity levels</u>
Direct labor hours		2,900 hours
Machine hours		2,400 hours
Setups	\$465,500	95 setup hours
Inspections	\$405,000	2,700 inspection hours
	<u>\$870,500</u>	

**Required:**

- Using the traditional system, determine the operating profit per unit for the brass style of faucet.
- Determine the activity-cost-driver rate for setup costs and inspection costs.
- Using the ABC system, for the brass style of faucet
  - compute the estimated overhead costs per unit.
  - compute the estimated operating profit per unit.
- Explain the difference between the profits obtained from the traditional system and the ABC system. Which system provides a better estimate of profitability? Why?

**Answer:**

**Answer to problem 2 (cont'd):**

**Problem 3 (10 points)**

The following data for the telephone company pertain to the production of 450 rolls of telephone wire during June. Selected items are omitted because the costing records were lost in a windstorm.

Direct Materials (All materials purchased were used.)

Standard cost per roll: a pounds at \$4.00 per pound.

Total actual cost: b pounds costing \$9,600.

Standard cost allowed for units produced was \$9,000.

Materials price variance: c.

Materials efficiency variance was \$80 unfavorable.

Direct Manufacturing Labor

Standard cost is 3 hours per roll at \$8.00 per hour.

Actual cost per hour was \$8.25.

Total actual cost: d.

Labor price variance: e.

Labor efficiency variance was \$400 unfavorable.

**Required:**

Compute the missing elements in the report represented by the lettered items.

**Answer:**

**Problem 4 (15 points)**

The following data are available for Ruggles Company for the year ended September 30, 20x4.

Sales:	24,000 units at \$50 each
Expected and actual production:	30,000 units
Manufacturing costs incurred:	
Variable:	\$525,000
Fixed:	\$372,000
Nonmanufacturing costs incurred:	
Variable:	\$144,800
Fixed:	\$77,400
Beginning inventories:	none

**Required:**

- Determine operating income using the variable-costing approach.
- Determine operating income using the absorption-costing approach.
- Explain why operating income is not the same under the two approaches.

**Answer:**

**Problem 5 (10 points)**

Pat, a Pizzeria manager, replaced the convection oven just six months ago. Today, Turbo Ovens Manufacturing announced the availability of a new convection oven that cooks more quickly with lower operating expenses. Pat is considering the purchase of this faster, lower-operating cost convection oven to replace the existing one they recently purchased. Selected information about the two ovens is given below:

	<u>Existing</u>	<u>New Turbo Oven</u>
Original cost	\$60,000	\$50,000
Accumulated depreciation	\$ 5,000	---
Current salvage value	\$40,000	---
Remaining life	5 years	5 years
Annual operating expenses	\$10,000	\$ 7,500
Disposal value in 5 years	\$ 0	\$ 0

**Required:**

- What costs are sunk?
- What costs are relevant?
- What are the net cash flows over the next 5 years assuming the Pizzeria purchases the new convection oven?
- What other items should Pat, as manager of the Pizzeria, consider when making this decision?

**Answer:**