

**BUSI 1005 – Management Accounting  
for Business Students**  
**Winter 2011**  
**TEST 2**



**There are 45 marks available on this exam**  
**This exam comprises of 8 questions and has XX pages.**  
**For all questions, show your work.**

**Question 1 (1 mark) (2 minutes)**

**Name:** \_\_\_\_\_

**Student #:** \_\_\_\_\_

*Please tick off the tutorial section you are registered for:*

<input type="checkbox"/> (2) Mon 9:30	<input type="checkbox"/> (10) Mon 19:00	<input type="checkbox"/> (18) Tue 19:00	<input type="checkbox"/> (26) Thu 11:30
<input type="checkbox"/> (3) Mon 10:30	<input type="checkbox"/> (11) Tue 11:30	<input type="checkbox"/> (19) Wed 11:30	<input type="checkbox"/> (27) Thu 12:30
<input type="checkbox"/> (4) Mon 11:30	<input type="checkbox"/> (12) Tue 12:30	<input type="checkbox"/> (20) Wed 12:30	<input type="checkbox"/> (28) Thu 13:30
<input type="checkbox"/> (5) Mon 12:30	<input type="checkbox"/> (13) Tue 13:30	<input type="checkbox"/> (21) Wed 15:30	<input type="checkbox"/> (29) Thu 16:30
<input type="checkbox"/> (6) Mon 13:30	<input type="checkbox"/> (14) Tue 14:30	<input type="checkbox"/> (22) Wed 16:30	<input type="checkbox"/> (30) Thu 18:00
<input type="checkbox"/> (7) Mon 14:30	<input type="checkbox"/> (15) Tue 15:30	<input type="checkbox"/> (23) Wed 18:00	<input type="checkbox"/> (31) Fri 10:30
<input type="checkbox"/> (8) Mon 16:30	<input type="checkbox"/> (16) Tue 16:30	<input type="checkbox"/> (24) Wed 19:00	<input type="checkbox"/> (32) Fri 11:30
<input type="checkbox"/> (9) Mon 18:00	<input type="checkbox"/> (17) Tue 18:00	<input type="checkbox"/> (25) Thu 10:30	<input type="checkbox"/>

**Question 2 (7 marks) (14 minutes)**

The Bibby Corporation's most recent income statement is as follows:

Sales	\$12,000,000
Variable expenses	<u>7,800,000</u>
Contribution margin	4,200,000
Fixed expenses	<u>2,800,000</u>
Operating income	1,400,000
Income tax expense	<u>350,000</u>
Net income	<u><u>\$ 1,050,000</u></u>

**Required –**

- What is the breakeven level of sales?
- Assume that the number of units sold is 100,000. What level of sales in units would be needed if the company wants to achieve a net income of \$1,500,000?
- Assume again that the number of units sold is 100,000. Management believes that a price reduction of \$5 per unit combined with an increase in advertising expenses of \$300,000 will

cause sales to increase by 20%. What is the net benefit or cost of this proposal? DO NOT prepare an income statement to arrive at the answer.

**Question 3 (6 marks) (12 minutes)**

The Carson Corporation manufactures three products: Larry, Moe and Curly. Data for each product is provided below:

	<b>Larry</b>	<b>Moe</b>	<b>Curly</b>
Selling price	\$30	\$75	\$200
Variable costs	20	55	130
Total sales at the regular sales mix	150,000	75,000	25,000

Total fixed costs = \$3,990,000

What is the breakeven point in units?

**Question 4 (9 marks) (18 minutes)**

The Foerster Company started operations on January 1, 20x3. The following information is available for the year ended December 31, 20x3:

Units produced	125,000
Units sold	90,000
Selling price (per unit)	\$80
Variable costs (per unit):	
Manufacturing	30
Selling	7
Fixed Costs (in total)	
Manufacturing	\$2,500,000
Selling	600,000

**Required –**

- Prepare an absorption costing income statement for the year ended December 31, 20x3.
- What would variable costing income be for the year ended December 31, 20x3. DO NOT prepare an income statement for this part.

**Question 5 (3 marks) (6 minutes)**

Superior Industries' sales budget shows quarterly sales for the next year as follows:

<i>Quarter</i>	<i>Sales (units)</i>
First	10,000
Second	8,000
Third	12,000
Fourth	14,000

Company policy is to have a finished goods inventory at the end of each quarter equal to 20% of the next quarter's sales. What should be the budgeted production for the second quarter?

**Question 6 (3 marks) (6 minutes)**

Avril Company makes collections on sales according to the following schedule:

- 30% in the month of sale
- 60% in the month following sale
- 8% in the second month following sale

The following credit sales are expected:

January	\$100,000
February	120,000
March	110,000

What should be the budgeted cash collections in March?

**Question 7 (10 marks) (20 minutes)**

John Douglass, Inc., manufactures dried onion dip mix using a standard cost system. Management had planned to produce 50 cartons for the period (the normal production). The following data were obtained from the Accounting and Production Departments for a recent operating period:

Standard cost per carton:

Onion and sour cream materials (2,000 litres @ \$1.20 per litre)	\$2,400
Direct labor (800 hours @ \$7 per hour)	5,600
Variable factory overhead (800 hours @ \$4 per hour)	3,200
Fixed factory overhead (800 hours @ \$2 per hour)	1,600

Actual results for 44 cartons produced:

Direct labor (36,300 hours)	\$263,175
Variable factory overhead incurred	150,000
Fixed factory overhead incurred	83,000

**Required:**

- Calculate the variable overhead spending and efficiency variances.
- Calculate the fixed overhead volume and budget variances.
- Calculate the over- or under-applied overhead for the current operating period and reconcile this amount to the results obtained in parts (a) and (b).

**Question 8 (6 marks) (12 minutes)**

a. Information about Stanley Company's direct material cost follow:

Standard price per kg.	\$345
Actual quantity purchased and used	420 kg.
Standard quantity allowed for production	435 kg.
Price variance	\$2,950 F

What was the actual purchase price per kg.?

b. Harrison Company reports the following direct labour information for a product for October:

Standard rate	\$7.00 per hour
Actual rate paid	\$7.20 per hour
Standard hours allowed for actual production	1,400 hours
Direct Labour efficiency variance	\$500 U

What were the actual hours worked and what was the direct labour rate variance?

**SOLUTION****Question 2**

- a) CM Ratio =  $\$4,200,000 / 12,000,000 = 35\%$     **1 mark**  
 Breakeven sales =  $\$2,800,000 / 0.35 = \$8,000,000$     **1 mark**
- b) CM/Unit =  $\$4,200,000 / 100,000 = \$42$   
 Before tax income =  $\$1,500,000 / 0.75 = \$2,000,000$     **1 mark**  
 Units =  $(\$2,800,000 + 2,000,000) / \$42 = 114,286$  units    **1 mark**

- c) Total CM
- |   |                          |
|---|--------------------------|
| Before:                                     | <u>\$4,200,000</u>       |
| After: $100,000 \times 1.2 \times (42 - 5)$ | 2 <u>4,440,000</u>       |
|   | 240,000                  |
| Advertising expenses                        | 1 <u>300,000</u>         |
| Incremental income                          | <u><u>(\$60,000)</u></u> |

**Question 3**

Sales Mix = 6:3:1    **1 mark**

Bundle CM =  $(6 \times \$10) + (3 \times \$20) + (1 \times \$70) = \$190$     **2 marks**

Breakeven point in bundles =  $\$3,990,000 / 190 = 21,000$  bundles    **1 mark**

Units -

Larry:  $21,000 \times 6 = 126,000$

Curly:  $21,000 \times 3 = 63,000$

Moe:  $21,000 \times 1 = 21,000$     **2 marks**

**Question 4**

(a) Sales (90,000 x \$80)			\$7,200,000
Cost of goods sold			
Cost of goods manufactured			
Variable: 125,000 x \$30	1	3,750,000	
Fixed	1	<u>2,500,000</u>	
		6,250,000	
Ending inventory: 35,000 x (\$6,250,000 / 125,000)	2	<u>1,750,000</u>	4,500,000
Gross margin			2,700,000
Selling expenses			
Variable: 90,000 x \$7	1	630,000	
Fixed	1	<u>600,000</u>	1,230,000
Operating income			<u>\$1,470,000</u>
(b) Absorption costing income			\$1,470,000
Less fixed costs in ending inventory: 35,000 x \$20	2	<u>700,000</u>	
Variable costing income	1		<u><u>\$ 770,000</u></u>

**Question 5**

Sales		8,000
Desired ending inventory: 12,000 x 20%	1.5	2,400
Less opening inventory: 8,000 x 20%	1.5	<u>-1,600</u>
		<u><u>8,800</u></u>

**Question 6**

January Sales: \$100,000 x 8%	1	8,000
February Sales: \$120,000 x 60%	1	72,000
March Sales: \$110,000 x 30%	1	<u>33,000</u>
		<u><u>\$113,000</u></u>

**Question 7**

a. Variable Overhead Spending Variance = AH (AR – SR)  
 = 36,300 (4.1322 – 4.00)  
 = \$4,800 U                      **2 marks**

Variable Overhead Efficiency Variance = SR (AH – SHA)  
 = 4.00 (36,300 – 35,200)  
 = 4,400 U                      **2 marks**

b. Fixed Overhead Budget Variance = Budgeted FOH – Actual FOH  
 = 80,000 - 83,000  
 = 3,000U                      **2 marks**

Fixed Overhead Volume Variance = Budgeted FOH – Applied FOH  
 = 80,000 - (44 x 1,600)  
 = 80,000 - 70,400  
 = 9,600U                      **2 marks**

c. Total actual overhead = 150,000 + 83,000 = 233,000  
 Total applied overhead = 44 x 4,800 = 211,200  
 Total underapplied overhead = 21,800U                      **2 marks**

**Question 8**

a. DM Price Variance = AQP (AP = SP)  
 \$2,950 F = 420 (AP – 345)  
 AP = 345 – 2,950 / 420  
 = 345 – 7.02  
 = 337.98                      **2 marks**

b. DL Efficiency Variance = SR (AH – SHA)  
 \$500U = \$7.00 (AH – 1,400)  
 AH = 1,400 + 500/7  
 = 1471.43                      **2 marks**

DL Rate Variance = AH (AR – SR)  
 1471.43 (7.20 – 7.00)  
 = \$294 U                      **2 marks**