Series 4 Examination 2008

MANAGEMENT ACCOUNTING

Level 3

Monday 1 December

Subject Code: 3723 S

Time allowed: **3 hours**

INSTRUCTIONS FOR CANDIDATES

- Answer **5** questions.
- All questions carry equal marks.
- Write your answers in blue or black ink/ballpoint. Pencil may be used only for graphs, charts, diagrams, etc.
- Begin your answer to each question on a new page.
- All workings must be shown.
- All answers must be correctly numbered but need not be in numerical order.
- You may use a calculator provided the calculator gives no printout, has no word display facilities, is silent and cordless. The provision of batteries and their condition is your responsibility.

QUESTION 1

(a) Describe what is meant by a **transfer price**. State why transfer prices may be required between divisions in a decentralised organisation, and the objectives of transfer prices in such an organisation.

(6 marks)

(b) Explain how **variance analysis**, and the study of the relationships between variances, can help to monitor operational performance.

(6 marks)

(c) Discuss the **human behavioural problems** that can be associated with budgetary control systems.

(8 marks)

(Total 20 marks)

QUESTION 2

A company commenced trading on 1 July, producing and selling a single product.

Unit variable cost and selling price details of the product are:

	$ per unit
Selling price	50
Direct material	10
Direct labour	12
Variable production overhead	4
Variable selling and distribution overhead	3

Monthly fixed overheads are:

Production overheads	$100,000
Selling and distribution overheads	$60,000

Activity is budgeted at 10,000 units per month, which is used to establish a pre-determined fixed overhead absorption rate if absorption costing is used.

The following activity took place during July and August:

	July	**August**
Sales	9,000 units	11,000 units
Production	12,000 units	13,000 units

REQUIRED

(a) Prepare profit statements for each month using:

(i) Marginal costing (8 marks)

(ii) Absorption costing. (8 marks)

(b) Prepare a statement reconciling the marginal with the absorption profit for each month. (4 marks)

(Total 20 marks)

QUESTION 3

Trio Limited manufactures and sells three products. Unit selling price and variable cost details are:

	Product		
($ per unit)	**A**	**B**	**C**
Selling price	17.20	10.00	22.40
Variable production costs	9.80	6.00	10.48
Variable non-production costs	2.24	1.20	2.96

Sales per period are:

Product A	11,400 units
Product B	19,020 units
Product C	8,700 units

Fixed costs per period are:

Production	$62,480
Non-production	$36,440

REQUIRED

(a) Calculate the:

(i) contribution/sales ratio of each product (3 marks)

(ii) net profit per period. (3 marks)

(b) Calculate, based upon the above sales mix (units), the:

(i) overall contribution/sales ratio (to one decimal place of %) (4 marks)

(ii) break-even point sales (to the nearest $ hundred) (3 marks)

(iii) sales (to the nearest $ hundred) required in a period to earn a profit of $120,000. (3 marks)

(c) Calculate the overall contribution/sales ratio (to one decimal place of %) based upon the following revised sales mix:

Product A	35% of total sales revenue
Product B	35% of total sales revenue
Product C	30% of total sales revenue

(4 marks)

(Total 20 marks)

QUESTION 4

The following information is to be used in the preparation of a flexible budget for production overheads:

(1) 100% capacity usage
13,600 direct labour hours @ $8.00 per hour
$104,000 direct materials

(2) Variable production overheads:
Utilities: 10% of direct wages
Consumables: 6% of direct materials

(3) Fixed production overheads:
Depreciation: $18,620
Maintenance: $8,220
Insurance: $7,300

(4) Semi-variable overheads (variable component closely related to direct labour hours):
$39,110 @ 12,900 direct labour hours
$35,880 @ 11,200 direct labour hours.

REQUIRED

(a) Prepare a flexible production overhead budget at each of the following capacity usage levels:

(i) 80%

(ii) 90%

(iii) 100%

(13 marks)

(b) Calculate a production overhead absorption rate, based on direct labour hours, at 90% capacity usage **(to 2 decimal places of $)**.

(3 marks)

(c) Explain the difference between **flexible budgets** and **fixed budgets**.

(4 marks)

(Total 20 marks)

QUESTION 5

A company is considering an investment in a new machine. There are two possibilities; each one will have an expected life of four years with a scrap value of $20,000. They would both be depreciated on a straight-line basis.

The following information is available:

Machine	**1**	**2**
Initial cost ($000)	500	600
Accounting net profit		
Year 1	60	70
2	80	80
3	150	90
4	150	100

The company has a weighted average cost of capital of 12% per annum.

Discount factors for 12%:

Year 1	0.893
2	0.797
3	0.712
4	0.636

REQUIRED

(a) Calculate the following for each of the machines:

(i) Accounting rate of return (using average investment) (2 marks)

(ii) Payback period (5 marks)

(iii) Net present value (6 marks)

(iv) Profitability index. (2 marks)

(b) Using the answers to part (a), recommend to the company which of the machines it should purchase stating any other factors that should be considered.
(3 marks)

(c) State how a weighted average cost of capital is calculated.
(2 marks)

(Total 20 marks)

QUESTION 6

A new business is planned to commence operations in January 2009 (with $250,000 capital paid into the bank).

Goods costing $60,000 will be purchased in early January with further purchases at the beginning of each subsequent month to replace the goods sold in the previous month. Purchase of goods will be on one month's credit.

Sales will be made on credit at a selling price of $24 per unit. This is a 60% mark-up on cost. 50% of customers by value are expected to pay on the last day of the month of sale for a 1% discount. The remaining 50% of customers are expected to pay on the last day of the month following sale. No bad debts are anticipated.

Sales forecasts for the four months to the end of April are:

January	1,000 units
February	2,000 units
March	2,400 units
April	2,700 units

Variable expenses are forecast at 10% of sales revenue, payable in the month incurred.

Fixed expenses, excluding depreciation, are forecast to be $13,600 per month. This includes rental of premises costing $30,000 in the first year and payable in full in advance. The remainder of the fixed expenses are payable in the month incurred.

Depreciation of fixed assets will be $2,200 per month on capital expenditure of $190,000. The fixed assets will be installed in January with payment spread equally between February and March.

REQUIRED

(a) Prepare a cash budget for each month (January, February, March and April).

(14 marks)

(b) Calculate the expected average debtor payment period on the assumption that credit sales are made evenly in each month.

(2 marks)

(c) Calculate the stock turnover ratio that will be expected over the year from April onwards. (You are to assume that sales continue at the rate of 2,700 units per month and that stock replenishment occurs on the first day of each month.)

(4 marks)

(Total 20 marks)

