

Series 4 Examination 2008

COST ACCOUNTING

Level 3

Friday 28 November 2008

Subject Code: 3716/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 answers must be correctly numbered but need not be in numerical order.
- Workings must be shown.
- Presentation is important.
- 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

Roland Green Limited uses batch production methods to produce a single product by combining two materials Exe and Wye.

The following information relates to the standard material cost of a batch:

Direct material input	100kgs	
Material price - Exe	\$7.50 per kg	
Material price – Wye	\$12.50 per kg	

The company has budgeted for a material mix ratio of 80:20 for Exe and Wye respectively.

The standard production specification states that a 90% yield of the product is expected.

The waste generated has no scrap value.

Actual results for a period were as follows:

Output	41,850kg	
Direct material - Exe	40,800kg	\$285,600
Direct material – Wye	7,200kg	\$93,600

REQUIRED

(a) Calculate the following variances for the period:

- (i) Material price for each material and in total
- (ii) Material mix for each material and in total
- (iii) Material yield in total.

(12 marks)

Elliot Barmby Limited makes a single product and uses a standard absorption costing system.

The production department budgets for a period include the following:

Production	27,000 units
Direct labour hours per unit	6.75 hrs

During the period the actual results were:

Production	27,800 units
Direct labour hours	192,384 hrs

REQUIRED

(b) Calculate the following production ratios for the period:

- (i) Efficiency
- (ii) Capacity
- (iii) Volume (activity).

(8 marks)

(Total 20 marks)

QUESTION 2

Frances Marney Manufacturing Ltd. operates an integrated accounting system and the following information is available for the month of December:

Opening Balances:		\$
Stocks	Raw materials	92,700
	WIP	54,586
	Finished Goods	68,950
		\$
	Purchases of raw materials	275,850
	Materials transferred to production	188,146
	Production overheads absorbed	64,685
	Direct wages incurred	56,050
	Production indirect wages & salaries incurred	20,800
	Materials written off	2,820
	Administration overheads incurred	40,670
	Selling and distribution overheads incurred	25,100
	Other indirect production overheads incurred	9,650
	Administration overheads absorbed	41,625
	Selling and distribution overheads absorbed	24,300
	Indirect materials issued to production overheads	14,645
	Depreciation on production machinery	19,170
	Factory cost of goods completed	348,750
	Factory cost of goods sold	389,250
	Sales	565,100
	Sales returns	5,000

REQUIRED

(a) Prepare the following control accounts for December:

- (i) Raw Materials (3 marks)
- (ii) W I P (3 marks)
- (iii) Finished Goods (2 marks)
- (iv) Production Overhead. (5 marks)

(b) Prepare the Profit & Loss Account, in 'T' account format, for December – clearly showing any under/over absorption of overheads. (7 marks)

(Total 20 marks)

QUESTION 3

Myhill Limited makes three products all using the same raw material.

The company is currently setting up its production schedule for January.

The raw material is in short supply and the company will only have 23,600kgs available for production for the month.

The details for these three products are as follows:

	PRODUCT		
	A	B	C
	\$/unit	\$/unit	\$/unit
Selling price	260	240	280
Materials (\$5 per kg)	50	30	40
Labour (\$10 per hr)	65	75	115
Variable overheads	85	60	57

Total fixed overhead is expected to be \$105,000 for the month.

The company is committed to supplying the following for the month:

Product A	600 units
Product B	350 units
Product C	250 units

The **maximum** estimated sales for each product for the month are as follows:

Product A	1,200 units
Product B	1,300 units
Product C	650 units

REQUIRED

- (a) Calculate the order of priority for production in January and the optimum production schedule, if short-term profit maximization is the key objective. (12 marks)
- (b) Calculate the maximum profit attainable by Myhill for the month. (4 marks)
- (c) Explain why a marginal cost approach, rather than a full cost approach, is used when dealing with limited resources. (4 marks)

(Total 20 marks)

QUESTION 4

Barmby Anderson manufactures a single product.

It is anticipated that monthly production and sales will be between 10,000 and 14,000 units.

The following monthly cost budgets have been prepared covering these two levels of activity:

Monthly costs \$

Cost element	10,000 units	14,000 units
Direct materials	156,000	217,230
Direct labour	108,000	152,280
Production overheads	145,500	162,900
Administration overheads	95,100	95,100
Selling overheads	74,700	88,380

The following budgeted information is also provided:

- (i) Each unit requires 3kg of raw material. A 5% discount is received on the excess of purchases of raw material over 37,500kg per month.
- (ii) The direct labour cost per unit increases by 20% on the excess of production over 13,500 units per month.
- (iii) Production overheads consist of a proportionately variable element plus a fixed monthly amount. In addition, there is a stepped increase of \$9,000 in the fixed monthly amount when production reaches 11,500 units.
- (iv) Selling overheads include variable costs of \$3.42 per unit.
- (v) No stock of finished goods or raw materials is held.
- (vi) The selling price of each unit is \$57.

During the month just ended, 13,200 units were manufactured and sold and the following costs were incurred:

	\$
Direct materials	205,665
Direct labour	141,309
Production overheads	163,317
Administration overheads	94,698
Selling overheads	86,264

REQUIRED

- (a) Prepare a statement for the month just ended showing, for each cost element, the flexed cost budget, the actual costs and the variance. (14 marks)

- (b) Calculate the budgeted break-even sales per month in both units and value. (6 marks)

(Total 20 marks)

QUESTION 5

Jason Fagan uses a material which it obtains from an outside supplier.

Each delivery of the material consists of 45,000 kilograms at a cost of \$15 per kg.

The lead time for delivery can vary between 12 and 18 days and the rate of usage of the material also varies between 480 and 720kgs per day.

Stock holding costs amount to 6% per annum of the average stockholding value.

REQUIRED

(a) Calculate:

- (i) The reorder level in kgs (to avoid a stockout) (2 marks)
- (ii) The minimum and maximum stock control levels in kgs (4 marks)
- (iii) The average stock in kgs (2 marks)
- (iv) The annual stock holding costs in \$. (2 marks)

The company converts this material into a single product.

The following information is available for the period December 2008 to June 2009:

Sales:

The budgeted sales, in units, are as follows:

January	February	March	April	May	June
21,000	23,000	24,000	26,000	27,000	28,000

Stocks:

The company wishes to maintain a closing stock each month equivalent to 10% of the following month's sales.

Each product takes 2kgs of the raw material to produce.

The company also wishes to maintain a closing stock each month equivalent to 20% of the materials used in the following month's production.

REQUIRED

- (b) (i) Production budget (in units) by month for the **four** month period January to April 2009 (4 marks)
- (ii) Raw materials purchases budget (in kgs and \$) by month for the **four** month period January to April 2009. (6 marks)

(Total 20 marks)

QUESTION 6

William Payton Limited makes three products and at present uses a traditional absorption costing approach in order to establish the production costs for these products.

The details for a period are as follows

	Product One	Product Two	Product Three
Production units	3,000	2,500	2,000
Per unit:			
Direct materials @ \$9 per kg	7.5kg	6kg	4.5kg
Direct labour hours @ \$14 per hour	4	5	4
Machine hours	3	6	6

Production overheads for the period are \$258,375 and are absorbed on a direct labour hour basis.

Payton is considering using an activity based costing (ABC) approach to calculate the production costs of each product

The following information gives a breakdown of the production overhead costs for the period:

ACTIVITIES	COSTS (\$)	COST DRIVERS
Set up	31,500	Number of production runs
Machining	67,500	Number of machine hours
Inspection	43,200	Number of production runs
Packaging	37,125	Number of orders
Material handling	79,050	Quantity of material used

You are given the following additional information for the period:

	Product One	Product Two	Product Three
Number of production runs	15	20	25
Number of orders	150	175	225

REQUIRED

(a) Calculate the production costs (to two decimal places) for one unit of each product using the traditional absorption costing approach. (6 marks)

(b) Calculate the production costs (to two decimal places) for one unit of each product using an activity based costing (ABC) approach. (14 marks)

(Total 20 marks)