

Series 2 Examination 2007

COST ACCOUNTING

Level 3

Wednesday 4 April

Subject Code: 3016

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

Triple Products Ltd uses a batch production method to manufacture its three products Alpha, Beta and Gamma. At present the company uses a traditional absorption costing system to establish the costs of production. Budgeted production data for the next period is as follows:

	Alpha	Beta	Gamma
Production output (units)	6,000	5,000	4,000
Production batch size (units)	30	50	20
Machine time per batch	6hrs	8hrs	5hrs
Material per batch at £15 per kg	20kg	30kg	40kg
Labour per batch at £12 per hour	6hrs	4hrs	8hrs

Variable production overheads are budgeted to be absorbed at £3.50 per labour hour.

Fixed production overheads for the period are budgeted to be £88,500, absorbed on a machine hour basis.

The company is considering the introduction of an activity based costing system.

Further investigation has revealed the following activities and related overhead costs:

Activities	Costs (£)
Product inspection	45,000
Machine set-up	24,000
Machine maintenance	12,000
Product despatch	11,200
Material handling	<u>7,500</u>
	<u>99,700</u>

Other information

- (i) Orders budgeted: Alpha 100 orders; Beta and Gamma 50 orders each. Each order is expected to require one machine set up
- (ii) One unit of product in every ten is inspected.
- (iii) Machine maintenance is carried out regularly based on a predetermined number of machine running hours.
- (iv) Each product is packed and despatched in crates containing the following number of products per crate: Alpha 20 units, Beta 50 units and Gamma 25 units. The number of crates used influences product despatch costs.
- (v) Material handling costs are influenced by the quantity of material used.

REQUIRED

Calculate the cost of one production **batch** for each product using:

- (a) Traditional absorption costing (6 marks)
- (b) Activity based costing (14 marks)

(Total 20 marks)

QUESTION 2

A company, which produces a single component for the motor industry, has budgeted to make 6,000 units in a year. The components sell for £80 each. The standard unit variable production costs are as follows:

Direct material A	2 kg at £4.50 per kg.
Direct material B	4 kg at £1.20 per kg.
Direct labour	1.5 hours at £8 per hour.
Variable overheads	Absorbed at £6.00 per unit.

Fixed factory overheads, absorbed at a predetermined rate based on direct labour hours, are expected to be £36,000 for the year and are expected to occur evenly.

The following actual information is available for the first six months of the year:

Opening stock of components	150 units
Sale of components	2,750 units
Closing stock of components	200 units

Actual fixed overheads for the six months were equal to budget. Actual variable costs per unit were as per standard cost.

REQUIRED

(a) Calculate for the first six months of the year:

- (i) the actual costs incurred in production
- (ii) the over/under absorption of fixed production overheads.

(11 marks)

(b) Prepare a trading account, for the first six months of the year in absorption costing format, clearly showing any over/under absorption of overheads.

(9 marks)

(Total 20 marks)

QUESTION 3

Filla Fabrications manufactures and sells its single product at £20 per unit. The company, which currently has a monthly manufacturing capacity of 20,000 units, has orders for and plans to sell 18,000 units in the next month.

Total monthly costs, for production and sales of 18,000 units and 20,000 units are estimated at £248,000 and £272,000 respectively. The company only manufactures to sales orders received and keeps no stock.

REQUIRED

(a) Calculate for next month the estimated:

- (i) Variable cost per unit
- (ii) Break even point (in units)
- (iii) Margin of safety as a % of sales
- (iv) Net profit.

(10 marks)

A mail order company has approached Filla Fabrications with the following two order options.

- (i) 2,000 units at a price of £18 each
- or**
- (ii) 4,000 units at a price of £16 each.

This is in addition to the sales orders already received by Filla Fabrications and must be completed during next month's production. Filla Fabrications can increase its monthly manufacturing capacity to 22,000 units by hiring additional equipment at a cost of £2,500 per month. No changes in variable costs are expected.

REQUIRED

(b) Advise Filla Fabrications, using supporting calculations, whether either of the mail order options should be accepted.

(7 marks)

(c) State three assumptions in cost-volume-profit analysis.

(3 marks)

(Total 20 marks)

QUESTION 4

The following balances were recorded in the cost ledger of a manufacturing company at the beginning of Month 2

	£000
Raw Material Control Account	70
Finished Goods Control Account	90
Work in Progress Control Account	60
Production Overhead Control Account (over absorbed)	5
Financial Ledger Control Account	215

During Month 2 the following transactions took place

	£000
Raw material purchases	110
Returns to suppliers	3
Materials issued from store	120
Total factory wages	100
Indirect production expenses	75
Work completed at cost	300
Production cost of sales	280
Sales	400

NOTES

- (i) 10% of raw material issues from stores are indirect
- (ii) 90% of factory wages are direct labour
- (iii) Factory overheads are absorbed at the rate of 110% of the direct labour wages.

REQUIRED

- (a) Record the above transactions in the cost ledger accounts for month 2. (14 marks)
- (b) Prepare a Costing Profit & Loss Account for month 2. (1 mark)
- (c) Close the accounts at the end of Month 2 and prepare a Trial Balance. (5 marks)

(Total 20 marks)

QUESTION 5

A company, which manufactures and sells two products, Tee and Pee, has prepared the following budget detail for Year 7.

	Tee	Pee
Sales (units)	8,000	15,000
Raw material RM001 requirement per finished unit	4kg	2kg
Raw material RM002 requirement per finished unit	2kg	1kg
Raw material wastage rate (of material introduced)	20%	20%
Production reject rate	10%	5%
Stocks of finished goods at start of Year 7 (units)	400	800

Production is spread evenly over the year. All rejects occur after inspection at the end of production. It is company policy to purchase sufficient raw material at the beginning of each month to meet that month's production requirements.

Closing stocks of both products are planned to be 25% above those at the start of the year.

REQUIRED

(a) Calculate for Year 7 the:

- (i) Production budget for each product (in good units)
- (ii) Material requirement budget for each material
- (iii) Average stock held for each material during each month.

(14 marks)

(b) Name two other budgets that may be prepared relating to the production function.

(2 marks)

(c) Describe two benefits that a business would expect to derive from the budget setting process.

(4 marks)

(Total 20 marks)

QUESTION 6

A company, which produces a single product and uses a standard costing system, prepares a monthly reconciliation statement showing the variances between standard production costs and actual costs. The following is the statement for the month just ended.

	£	£
Standard cost of production		30,240
Variences:		
Material price	1280A	
Material usage	160A	
Labour rate	200A	
Labour efficiency	320F	
Fixed overhead expenditure	600A	
Fixed overhead volume	<u>480F</u>	<u>1,440A</u>
Actual cost of production		<u>31,680</u>

Actual production for the month 420 units

The standard direct cost for one unit was as follows:

Direct materials	8 kg @ £4 per kg.
Direct labour	2 hours @ £8 per hour

Fixed production overheads are absorbed at a rate of £12 per direct labour hour.

REQUIRED

(a) Calculate for the month just ended:

- (i) The actual quantity of direct materials used and the total actual direct material cost (assume usage quantity equals purchased quantity)
- (ii) The actual direct labour hours worked and the actual direct labour cost
- (iii) The actual fixed production overhead incurred
- (iv) The budgeted production units.

(14 marks)

(b) State possible reasons for the variances on:

- (i) Direct material
- (ii) Direct labour

(6 marks)

(Total 20 marks)