

Series 3 Examination 2012

COST ACCOUNTING

Level 3

Wednesday 6 June

Subject Code: 3017

Time allowed: **3 hours**

INSTRUCTIONS FOR CANDIDATES

- Answer **all 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

Triage Products Ltd manufactures three products Pee, Que and Tee. 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:

	Pee	Que	Tee
Production output (units)	500	400	200
Material per unit at £5 per kg	10kg	20kg	15kg
Labour per unit at £10/hour	2hrs	2hrs	3hrs
Machine time per unit	4hrs	3hrs	4hrs

Variable production overheads are budgeted to be absorbed at £3.50 per labour hour.
Fixed production overheads for the period are budgeted to be £30,000, 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 fixed overhead costs:

Activities	Costs (£)
Product inspection	9,600
Machine set-up	6,400
Machine maintenance	4,300
Packing and despatch	3,300
Material handling	<u>6,400</u>
	<u>30,000</u>

Other information

- (i) Budgeted production is expected to consist of: Pee 10 orders; Que and Tee 5 orders each. Each order is expected to require one machine set up and two inspections
- (ii) Machine maintenance is carried out regularly based on a predetermined number of machine running hours.
- (iii) Each product is packed and despatched in crates containing the following number of products per crate: Pee 20 units, Que 25 units and Tee 8 units. The number of crates used influences product despatch costs.
- (iv) Material handling costs are influenced by the quantity of material used.

REQUIRED

- (a) Calculate for the next period, the production cost of one unit of each product using:
 - (i) Traditional absorption costing
 - (ii) Activity based costing

(16 marks)
- (b) Explain the meaning of the term, cost driver and provide two examples to illustrate your answer

(4 marks)

(Total 20 marks)

QUESTION 2

Sinclair Ltd manufactures a product in a single process. All materials are introduced at the start of the process and any losses that occur have no scrap value. The company uses the first-in-first out method of valuation.

Additional Information

Production overheads are absorbed at the rate of £10 per direct labour hour.

Direct labour is paid at the rate of £12 per hour.

The following information is available for the last period:

Opening stock of work-in-progress	500kg	£4,150
(60% complete with respect to labour and overheads)		
Material introduced	8,000kg	£35,000
Direct labour		£16,560
Transfer to finished goods	7,000kg	
Closing stock of work-in-progress	600kg	
(50% complete with respect to labour and overheads)		

A normal loss of 1,000kg was expected.

All losses are detected at the end of the process.

REQUIRED

- (a) For the last period calculate:
- (i) the equivalent units and the cost per unit for each element of cost
 - (ii) the value of the transfer to finished goods and of the closing stock of work-in-progress
- (11 marks)
- (b) Prepare the process account for the last period
- (4 marks)
- (c) Define normal loss, abnormal loss, abnormal gain and contrast their cost accounting treatment
- (5 marks)

(Total 20 marks)

QUESTION 3

Makit Ltd manufactures and sells four products (Hay, Bee, Cee and Dee) to the automobile industry. The company has prepared the following budget detail for year 2.

Product	Hay	Bee	Cee	Dee
Sales (units)	12,000	8,000	6,000	10,000
Sales price per unit	£20	£20	£25	£25
Direct material (per unit)	£6	£7	£5	£8
Direct labour (per unit)	£4	£6	£5	£6
Fixed costs (per unit)	£5	£5	£5	£5

REQUIRED

- (a) Calculate the contribution to sales ratio for each product and for Makit Ltd overall. (4 marks)
- (b) Calculate the break-even revenue (to the nearest thousand) based on the budgeted sales mix. (2 marks)
- (c) Draw a conventional break-even chart for the budgeted sales mix. Indicate clearly on the chart the break-even revenue, the margin of safety and the profit for the budgeted sales of all four products (8 marks)

The company is considering increasing its advertising on product Cee. Market research suggests that this would generate a 40% increase in the sales of product Cee, have no effect on the sales of product Bee and Dee but would reduce the sales of product Hay by 25%.

The additional advertising would increase the fixed costs by £10,000 for the year

REQUIRED

- (d) Advise the company, using supporting calculations, whether to increase the advertising on product Cee. (6 marks)

(Total 20 marks)

QUESTION 4

Travelfar Ltd, a haulage company, which operates a fleet of 8 similar heavy goods vehicles and employs 8 drivers, has prepared the following monthly flexible budget based on the number of contracted jobs.

Number of contracts	120	140	160	180
	km	km	km	km
Vehicle travel (contracted to customer)	24,000	28,000	32,000	36,000
Vehicle travel (not contracted to customer) i.e. return journey	18,000	21,000	24,000	27,000
	£	£	£	£
Income from customers	52,800	61,600	70,400	79,200
Fuel costs	8,400	9,800	11,200	12,600
Driver wages	11,300	12,350	13,400	14,450
Vehicle maintenance	5,000	5,000	6,000	6,000
Office costs	1,960	2,120	2,280	2,440
Other operational costs	9,000	9,000	9,000	9,000

The following information has been provided

Income from customers is generated by charging a rate per km proportional to the contracted distance travelled.

Drivers are paid a fixed wage plus a variable wage proportional to the total vehicle distance travelled.

Office costs are partly related to the number of contracts completed

During month 1 the following actual data was recorded:

Number of contracts jobs	164
	km
Vehicle travel (contracted to customers)	34,000
Vehicle travel (not contracted to customers) i.e. return journey	23,800
	£
Income from customers	82,660
Fuel costs	12,980
Driver wages	12,810
Vehicle maintenance	5,500
Office costs	2,412
Other operational costs	9,400

REQUIRED

(a) Prepare a statement for month 1 showing for each budgeted item the following:

- (i) The flexed budget
- (ii) The actual result
- (iii) The variance.

(16 marks)

(b) Explain the difference between a forecast and a budget

(4 marks)

(Total 20 marks)

QUESTION 5

The standard variable production costs of a company's single product in the last period were as follows:

Direct materials		£
M01	4kg at £2 per kg	8.00
M02	2metres at £8 per metre	16.00
Direct labour		
Grade A	3 hours at £10 per hour	30.00
Grade B	4 hours at £12 per hour	48.00

Budgeted production for this period was 480 units

Actual production and costs relating to this period were as follows:

Production 500 units

Direct materials

Purchases

M01 2,000 kg purchased at a total cost of £4,300
M02 800metres purchased at a total cost of £6,200

Issues to production

M01 1,950kg
M02 900metres

Direct labour

Grade A 1,600 hours worked at a total cost of £15,600
(includes 150 hours idle time caused by machine breakdown)

Grade B 2,100 hours worked at a total cost of £25,450
(includes 50 hours idle time caused by machine breakdown)

At the beginning of the period the following quantities of raw material were in stock:

M01 200 kg
M02 120 metres

There were no stocks of work in progress at the beginning or end of the period.

The company's policy is to calculate material price variance at the time of purchase.

REQUIRED

For the last period

(a) Calculate the following variances:

- (i) Direct material price (for each type of raw material)
- (ii) Direct material usage (for each type of raw material)
- (iii) Direct labour rate (for each grade of labour)
- (iv) Idle time (for each grade of labour)
- (v) Labour efficiency (for each grade of labour)

(12 marks)

(b) Prepare the Raw Materials Stock Account for each type of direct material (include in your accounts the price variance).

(8 marks)

(Total 20 marks)