

**Series 2 Examination 2009**

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**COST ACCOUNTING**

**Level 3**

**Wednesday 1 April**

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

A company, which manufactures two products (Product P and Product Q), produces its budgets on a weekly basis. Each product contains two ingredients (Ingredient A and Ingredient B) which are mixed together in the manufacturing process. The finished products contain the following ingredient proportions by weight.

Product	Ingredient A	Ingredient B
P	10%	90%
Q	20%	80%

Products are manufactured in batches of 20 units each and the finished weight of each batch is expected to be:

Product P	9kg
Product Q	11.25kg

During the manufacturing process Ingredient A is subject to a 10% weight loss where as Ingredient B suffers no loss.

The following budgeted production has been scheduled for week 5:

Products	Mon	Tues	Weds	Thurs	Fri
P (units)	300	500	600	400	200
Q (units)	240	360	400	400	120

Ingredient A is ordered weekly in advance for a daily JIT delivery on the morning of the day of manufacture. No stock of this ingredient is kept.

Ingredient B is ordered weekly in advance, the complete week's order being delivered on the Monday morning. The company keeps a stock level, at the end of the week, equivalent to 25% (to the nearest 10kgs) of the week's consumption.

Stock of Ingredient B at start of week 5 is 350kgs.

### REQUIRED

(a) Determine, for week 5, the budgeted purchase order quantity for both Ingredient A and Ingredient B and the budgeted daily delivery schedule for Ingredient A. (16 marks)

(b) Briefly explain the principles of a just-in-time approach to stock management. (4 marks)

**(Total 20 marks)**

## QUESTION 2

A company produces a lubricating fluid for the automobile industry in two processes. During a period the resources input into the first process were as follows

Material A 250 litres at £2.40 per litre  
Material B 100 litres at £10.00 per litre  
Material C 150 litres at £5.20 per litre  
Direct labour 220 hours at £8.00 per hour  
Production overhead is absorbed at £12.00 per hour.

A normal loss, by evaporation, of 20% of the input volume is expected. 420 litres of fluid were transferred to the second process.

In the second process the fluid is poured into plastic containers. Each container is filled with half a litre of fluid. 5% of the fluid is lost, which is expected, during filling process. The following additional costs were incurred in the second process:

Containers and labels £435  
Direct labour 50 hours at £7.50 per hour  
Production overhead is absorbed at £9 per direct labour hour.

There was no work-in-progress in either of process 1 or process 2 at the beginning or the end of the period.

### REQUIRED

(a) For the period:

- (i) prepare the account for the first process
- (ii) calculate the total production cost per filled container.

(17 marks)

(b) Define normal loss, abnormal loss and abnormal gain.

(3 marks)

**(Total 20 marks)**

### QUESTION 3

A company, which produces a single component for the motor industry, has just completed its first year of trading. The summary profit and loss account for the year, is set out below:

	£	£
Sales (8,000 units)		256,000
Direct Costs		
Direct material	68,000	
Direct labour	64,000	
Direct expenses	12,000	
Overheads		
Production	56,000	
Administration	8,000	
Selling	52,000	<u>260,000</u>
Net Loss		<u>4,000</u>

The following information is available:

- (i) All of the direct costs are variable with production.
- (ii) The production overhead figure includes £40,000 fixed costs. The remaining production overheads vary with production.
- (iii) All of the administration overheads are fixed.
- (iv) Variable selling overheads are incurred at the rate of £4 per unit. The remaining selling overheads are fixed.

### REQUIRED

- (a) The break-even point in units and sales value. (7 marks)
- (b) The profit that would have been earned from the sale of 10,000 units. (2 marks)
- (c) The number of units needed to be sold to achieve a profit of £20,000. (2 marks)

The company has set a profit objective of £16,000 for year 2. Two suggestions have been made as to how this profit could be achieved.

#### Suggestion 1

Reduce the selling price by £3 per unit and use a less expensive material that would reduce the direct material cost by £2 per unit.

#### Suggestion 2

Increase the selling price by £2 and increase advertising expenditure by £48,000. In addition use a less expensive material that would reduce the material cost by £2 per unit. All other fixed costs and unit variable costs will remain unchanged for year 2.

### REQUIRED

- (d) Calculate for each suggestion how many units need to be sold to achieve the profit objective of £16,000. (9 marks)

**(Total 20 marks)**

#### QUESTION 4

Sole Products produces a single product and uses a standard absorption costing system. The production department budgets for the next period include the following:

Production output	800 units
Direct labour per unit	4 hours @ £12 per hour
Fixed overheads	£25,600

Fixed production overheads are absorbed on the basis of standard direct labour hours.

The actual results for the period were as follows:

Production output	840 units
Direct labour	3,600 hours, at a total cost of £41,400 (includes 400 hours idle time caused by machine breakdown)
Fixed overheads	£24,400

#### REQUIRED

(a) Calculate for the period, the following production ratios:

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

(6 marks)

(b) Calculate for the period, the following variances:

- (i) Direct labour rate
- (ii) Idle time
- (iii) Direct labour efficiency.

(7 marks)

(c) Calculate for the period, the following overhead variances:

- (i) Expenditure
- (ii) Volume
- (iii) Volume capacity
- (iv) Volume efficiency.

(7 marks)

**(Total 20 marks)**

## QUESTION 5

A company operates a non-integrated accounting system. The reconciliation statement prepared for month 1 of the financial year was as follows:

	£	£
Profit as per cost accounts		40,100
<i>Add:</i>		
Raw material closing stock difference	2,150	
Work-in-progress opening stock difference	865	
Work-in-progress closing stock difference	975	
Finished goods opening stock difference	3,250	
Selling and distribution overheads over absorbed	680	
Notional rent charge	<u>7,500</u>	<u>15,420</u>
		55,520
<i>Deduct:</i>		
Raw material opening stock difference	1,850	
Finished goods closing stock difference	3,550	
Production overhead under absorbed	4,950	
Administration overhead under absorbed	<u>1,550</u>	<u>11,900</u>
Profit as per financial accounts		<u>43,620</u>

In the cost ledger, overheads are absorbed as follows:

Production overheads	£12.50 per direct labour hour
Administration overheads	10% of sales
Selling and distribution overheads	6% of sales

Any over/under absorbed overhead balance at the end of a month is carried forward to the following month. Any balance remaining at the end of a financial year is transferred to the Profit and Loss Account.

Sales in month 1 were £700,000 and 9,500 direct hours were worked.

In the financial ledger, the following stocks relate to Month 1:

	Opening stock	Closing Stock
Raw materials	£112,500	£124,500
Work-in-progress	£34,500	£45,500
Finished goods	£302,500	£355,000

### REQUIRED

(a) Calculate for month 1:

- the opening and closing stock values in the cost ledger
- the actual overhead expenditure.

(15 marks)

(b) Suggest a reason why the cost and financial accounting valuations for raw material stock are different.

(3 marks)

(c) Explain what the item Notional rent charge means.

(2 marks)

**(Total 20 marks)**