

Series 4 Examination 2010

COST ACCOUNTING

Level 3

Tuesday 9 November

Subject Code: 3017

Time allowed: **3 hours**

INSTRUCTIONS FOR CANDIDATES

- Answer **all 5** questions.
- All questions carry equal marks.
- Study the “**REQUIRED**” section of each question carefully and extract the data required for your answers from the information supplied.
- 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 uses two raw materials (Material Tee and Material Pee) during production. The following information is provided relating to the current level of purchases, uses and stockholding of each material.

Material	Order quantity	Purchase price	Monthly usage	Safety stock
Tee	5,000 litres	£8.00/litre	2,500 litres	1,000 litres
Pee	2,000 kg	£12.00/kg	1,000 kg	2,000 kg

Ordering costs for both materials are £200 per order. Stockholding costs are 20% of the average stockholding value per annum.

The supplier of material Pee has offered a discount off the purchase price if the order quantity is increased. Details are as follows:

Order quantity	Discount
4,000 kg	2%
6,000 kg	3%

REQUIRED

(a) Calculate for material Tee:

- (i) the annual ordering costs
- (ii) the average stock and average stock investment.
- (iii) the annual stock holding costs

(7 marks)

(b) Calculate for material Pee:

- (i) the average stock investment for each order quantity
- (ii) the order quantity that would minimise annual costs

(13 marks)

(Total 20 marks)

QUESTION 2

Triple Products Ltd manufactures three products (Products X, Y and Z) in three processes. At the end of process one some of the output is sold as product X, while the remaining good production is transferred to process two for further processing. At the end of process two some of the output is sold as product Y, while the remaining good production is further processed, in process three into product Z.

The following information relates to the month of October, in the current year.

Input

	Process One	Process Two	Process Three
	£	£	£
Direct material (4,000 units)	8,000	0	0
Added material	0	1,300	1,250
Direct labour	6,000	6,500	7,000
Factory overheads	5,000	7,000	8,000

Output

	Process One	Process Two	Process Three
	Units	Units	Units
Product X transferred to finished goods	2,200	0	0
Transfer to Process Two	1,600	0	0
Product Y transferred to finished goods	0	1,000	0
Transfer to Process Three	0	500	0
Product Z transferred to finished goods	0	0	485

Notes

- 1) There is a normal loss of 5% of input units in all processes, which has no scrap value.
- 2) The added material in Process Two and Process Three does not increase the number of units processed.
- 3) There are no stocks of opening or closing work in progress in any process.

REQUIRED

Assuming that the company uses the physical unit's basis for valuing the output from each process, produce the following accounts for October in the current year:

- (a) Process One account (5 marks)
- (b) Process Two account (8 marks)
- (c) Process Three account (7 marks)
- (Total 20 marks)**

QUESTION 3

Sinclair Ltd, which manufactures and sells a single product, is preparing a set of budgets for the forthcoming period of six months (January to June)

The following information is available.

(1) Sales

Budgeted sales units by month:

Jan	Feb	March	Apr	May	June	July
100	60	120	140	100	80	100

At present the selling price is £50 per unit. A 5% increase in selling price is budgeted for April and beyond.

(2) Manufacturing and Stock Holding

- (i) There is a shortage of storage capacity which restricts stock holding to a maximum of 80 units.
- (ii) A minimum stock level of finished products will be maintained at the end of each month equivalent to half the estimated sales of the following month.
- (iii) The stock level at 1st Jan is expected to be 60 units.
- (iv) It is the company policy to at least fill normal hours production capacity each month unless this causes a stock holding problem.
- (v) Overtime will be restricted to the minimum necessary to comply with minimum stock requirements.
- (vi) During the months of January, February, April and June the normal hours production capacity is 100 units. Output for each of these months can be increased, with overtime, up to 140 units.
- (vii) During the months March and May, output is restricted due to holidays as follows:

March Normal hours capacity is restricted to 80 units
Output can be increased with overtime up to 120 units

May Normal hours capacity is restricted to 60 units
Output can be increased with overtime up to 90 units

(3) Labour Costs

Normal direct labour cost £800 per month. This amount is paid even when Output is restricted due to holidays or capacity problems. Additional wages in the form of overtime are paid at the rate of £10 per unit over and above normal output for the month.

REQUIRED

(a) Prepare the following budgets for each of the six months January to June

- (i) Sales value budget
- (ii) Production output budget in units
- (iii) Closing stock budget in units
- (iv) Labour wage budget

(16 marks)

(b) Define the term 'principal budget factor' and explain its influence on the budget setting process.

(4 marks)

(Total 20 marks)

QUESTION 4

Company A uses a standard costing system to produce its single product Alpha. The following budgeted information for period 9.

Sales 625 units at £100 each
Gross Profit £20,000.

At the end of period 9 the company recorded the following variances:

Sales price £2,950 Favourable
Sales volume profit £1,120 Adverse

REQUIRED

(a) Calculate for period 9

- (i) The actual number of product Alpha's sold.
- (ii) The actual sales price of product Alpha.

(6 marks)

Company B has recorded the following variances for material M:

Material price £400 Adverse
Material usage £600 Favourable

Material M is used exclusively in the manufacture of Product Beta. The material price variance is calculated on purchase. The actual purchase price of Material M, in the period, was £10.50 per kg. The standard cost of Material M, per unit of product, is £3.00 (0.3kg x £10.00 per kg). 2,800 units of Product Beta were manufactured in the period.

The standard direct labour cost of Product Beta is £160 per 10 products (20 hours @ £8.00 per direct labour hour) 5,625 direct labour hours were worked in the period at a cost of £44,800.

The fixed production overhead absorption rate for Product Beta is £12.00 per direct labour hour. 2,600 units of product Beta were budgeted to be manufactured in the period.

REQUIRED

(b) Calculate for the period:

- (i) the quantity of Material M purchased
- (ii) the quantity of Material M used
- (iii) the direct labour variances relating to Product Beta
- (iv) the fixed production overhead volume capacity and efficiency variance relating to Product Beta

(14 marks)

(Total 20 marks)

QUESTION 5

A company operates a non-integrated accounting system. For the accounting year ended 31 December Year 9, the Statement which reconciles the profit shown in the Financial Accounts with that shown in the Cost Accounts is as follows:

		£	£
Profit as per Financial Accounts			95,720
Add	Opening Stock: Work-in-Progress	1,800	
	Opening Stock: Finished Goods	2,300	
	Closing Stock: Raw Materials	<u>1,500</u>	
			5,600
Less	Opening Stock: Raw Materials	500	
	Closing Stock: Work-in-Progress	800	
	Closing Stock: Finished Goods	<u>1,300</u>	
			<u>2,600</u>
			98,720
Less	Dividends received	4,400	
	Rent received	<u>9,000</u>	
			13,400
Add	Under absorbed production overheads carried forward in the Cost Accounts		<u>2,000</u>
Profit as per Cost Accounts			<u>87,320</u>

The Stock Accounts appeared in the Financial Accounts as follows:

Raw Materials Stock Account

Year 9		£	Year 9		£
1 Jan	Balance b/d	16,000	Jan-Dec	Returns to Suppliers	1,500
Jan-Dec	Purchases	210,000	Jan-Dec	Work-in-Progress	206,000
			31 Dec	Balance c/d	<u>18,500</u>
		<u>226,000</u>			<u>226,000</u>
Year 10					
1 Jan	Balance b/d	18,500			

Work-in-Progress Account

Year 9		£	Year 9		£
1 Jan	Balance b/d	24,000	Jan-Dec	Finished Goods	654,000
Jan-Dec	Raw Materials Stock	206,000	31 Dec	Balance c/d	26,000
Jan-Dec	Direct Wages	300,000			
Jan-Dec	Production Overheads	<u>150,000</u>			
		<u>680,000</u>			<u>680,000</u>
Year 10					
1 Jan	Balance b/d	26,000			

Finished Goods Stock Account

Year 9		£	Year 9		£
1 Jan	Balance b/d	40,000	Jan-Dec	Cost of Goods Sold	650,000
Jan-Dec	Work-in-Progress	<u>654,000</u>	31 Dec	Balance c/d	<u>44,000</u>
		<u>694,000</u>			<u>694,000</u>
Year 10					
1 Jan	Balance b/d	44,000			

REQUIRED

For the year ended 31 December Year 9 prepare the following Accounts in the Cost Ledger:

- (a) Raw Materials Stock Control Account. (5 marks)
- (b) Work-in-Progress Stock Control Account. (6 marks)
- (c) Finished Goods Stock Control Account. (4 marks)
- (d) Production Overhead Control Account. You are advised that there was a nil balance on this Account at 1 January Year 9. (5 marks)

(Total 20 marks)