Sample Paper 2008

COST ACCOUNTING

Level 3

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) State **2** examples of **each** of the following:

(i) Stock holding costs (2 marks)

(ii) Ordering costs. (2 marks)

A company uses two materials (Material X and Material Y) which are purchased from two different suppliers.

The following information is available regarding Material X:

Cost of material	£7.20 per kg
Order quantity	500 kg per delivery
Annual stock holding cost	10% of average stock holding value

The lead time for delivery can vary between 8 and 12 days
The rate of usage can vary between 15 and 25 kg per day.

REQUIRED

(b) Calculate for material X:

(i) the reorder level in kg to ensure no stock-outs occur (2 marks)

(ii) the minimum and maximum stock control levels in kg (4 marks)

(iii) the annual stockholding costs in £s. (3 marks)

The following information is available regarding Material Y:

Cost of material	£20 per kg (before discount)
Ordering costs	£200 per order
Minimum stock control level	100 kg
Annual stock holding costs	10% of average stock holding value
Order sizes available	200, 500 and 1,000 kgs

The company has budgeted to use 1,000 kgs during the forthcoming year.

The supplier of material Y offers the following quantity discounts:

Order quantity	Discount
200 kg	No discount
500 kg	5%
1,000 kg	7.5%

REQUIRED

(c) Advise the company on the order size that minimises the total annual cost. Support your advice with calculations.

(7 marks)

(Total 20 marks)

QUESTION 2

A limited manufactures a product whereby the initial raw material passes through two processes (Process One and Process Two).

The output of Process One is passed to Process Two, where further raw material is added. Direct costs and output for the month just ended were:

Process One

Initial raw material	3,800 kgs costing £200,000
Direct labour	£145,210
Expected output	85% of input
Transfer to Process Two	3,150 kgs

Process Two

Transfer from Process One	3,150 kgs
Raw materials added	2,850 kgs costing RM287,500
Direct labour	£89,690
Expected output	90% of total input
Actual output	5,520 kgs

There was no work in progress at either the beginning or end of the month.
Overheads for the month totalled £420,800.

The overheads are apportioned between the two processes as follows:
Process One 55%
Process Two 45%

Losses that arise from the processes are sold for scrap. Losses that occur from Process One are sold for £20 per kg, whilst the losses that occur from Process Two are sold for £18 per kg.

REQUIRED

Prepare for the month just ended:

(a) Process One Account

(6 marks)

(b) Process Two Account

(6 marks)

(c) Normal Loss/Gain Account

(4 marks)

(d) Abnormal Loss/Gain Account.

(4 marks)

(Total 20 marks)

QUESTION 3

A company, which manufactures a single product, has prepared the following budgeted information for the next period:

Production/sales units	16,000
Selling price per unit	£20
Direct material per unit	£5
Direct labour per unit	£3
Production overheads	£108,000
Selling and distribution overheads	£42,000
Administration overheads	£10,000

The following points have been revealed concerning the budget:

(1) The budget is based on 80% utilisation of maximum capacity
(2) Production overheads are absorbed on a cost per unit basis based on the maximum capacity and a total cost of £120,000 at maximum capacity
(3) Selling and distribution overheads include a fixed element of £26,000
(4) Administration overheads are fixed.

REQUIRED

(a) Calculate for the next period:

(i) The fixed overhead costs

(ii) The breakeven point (in units)

(iii) The margin of safety as a % of the sales.

(9 marks)

The company is considering reducing its selling price to £18 per unit. Market research suggests that this price reduction will generate the additional sales for the company to operate at maximum capacity.

REQUIRED

(b) Assuming a selling price of £18 per unit and maximum capacity production output, calculate for the next period:

(i) The breakeven point (in units)

(ii) The margin of safety as a % of sales.

(3 marks)

(c) Plot on the graph paper provided, a single breakeven chart showing:

(i) Total costs

(ii) Total revenue at each selling price

(iii) Break-even point and margin of safety at each selling price.

(8 marks)

(Total 20 marks)

QUESTION 4

A company manufactures three Products P, Q and R. Each product contains two fluids A and B which are processed together in the following volume ratios:

Product	Ratio (A:B)
P	1:3
Q	1:4
R	1:5

Prior to product processing the two input fluids A and B are subject to the following filtering operations:

Product P both fluids are filtered.
Product Q only fluid B is filtered
Product R neither of the fluids is filtered.

A 20% volume loss for both fluids occurs during the filtering operation. No other losses occur during manufacture.

The budgeted purchase price of the fluids is £12.00 per litre for fluid A and £8.20 per litre for fluid B. At the beginning of the budget period the stock holding and stock control levels are as follows:

	Fluid (litres)		Product (units)		
	A	**B**	**P**	**Q**	**R**
Stock	525	975	260	340	280
Control levels					
Minimum	400	800	200	300	250
Maximum	800	1,200	300	400	400

It is planned to increase all three product stock levels to the maximum control level and reduce both fluid stock levels to the minimum control level by the end of the budget period. Budgeted sales in the period are:

Product P	1,960 units
Product Q	3,940 units
Product R	3,480 units

REQUIRED

(a) Determine for the budget period:

(i) the budgeted production of each of Products P, Q and R (3 marks)

(ii) the budgeted quantity of each of the input fluids, A and B, lost during the filtering process (8 marks)

(iii) the budgeted purchases of each of the fluids A and B (in both litres and £). (5 marks)

(b) Describe **2** benefits that a business would expect to derive from the budget setting process. (4 marks)

(Total 20 marks)

QUESTION 5

The standard production costs per unit of a company's single product in a period were:

		£
Direct materials		
RM01	4kg at £3 per kg	12.00
RM02	2metres at £4 per metre	8.00
Direct labour		
Grade 1	2 hours at £8 per hour	16.00
Grade 2	1 hours at £10 per hour	10.00
Fixed overheads		24.00
		70.00

Budgeted production for this period was 1,200 units

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

Production	1,250 units
Direct material Purchases	
RM01	5,300 kg purchased at a total cost of £16,200
RM02	2,400metres purchased at a total cost of £9,400
Issues to production	
RM01	5,100kg
RM02	2,200metres
Direct labour	
Grade 1	2400 hours worked at a total cost of £18,600
Grade 2	1300 hours worked at a total cost of £12,000

Fixed production overheads incurred £28,000

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

RM01	200 kg
RM02	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 this period

(a) Calculate the following variances:

(i) Direct material price and usage (for each type of raw material) (6 marks)

(ii) Direct labour rate and efficiency (for each grade of labour) (6 marks)

(iii) Fixed overhead expenditure and volume (2 marks)

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

(6 marks)

(Total 20 marks)

