

Series 3 Examination 2007

COST ACCOUNTING

Level 3

Monday 11 June

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

A company purchases a number of different components from an outside supplier. The following information relates to three of these components.

Component A1

Daily usage varies between 25 and 35 units
Lead time for delivery varies between 19 and 25 days
Order quantity is 1,000 units

Component A2

Annual usage is 4,800 units (evenly distributed through the year)
Cost of component is £30 per unit
Ordering costs are £50 per order
Stock holding costs are 10% of the component cost per annum
No safety stock is held.

Component A3

Balance in stores is currently 1,250 units
Stock on order is 2,000 units
Allocated stock is 550 units

REQUIRED

- (a) For component A1 calculate:
- (i) the reorder level
 - (ii) the minimum and maximum stock control levels
- (6 marks)
- (b) For component A2 calculate:
- (i) the economic order quantity
 - (ii) the total annual cost (if orders are placed in this quantity)
- (8 marks)
- (c) For component A3 calculate the free stock currently available
- (2 marks)
- (d) Briefly explain the meaning of:
- (i) Reorder level
 - (ii) Allocated stock
 - (iii) Free stock
- (4 marks)

(Total 20 marks)

QUESTION 2

A company produces a single product in a continuous process. The following information is available for Period 5.

	Units	£
Opening work in progress	12,500	21,250
Started in period	40,000	
Material introduced		55,890
Conversion costs		72,400
Output to finished goods	33,500	
Closing work in progress	13,000	
Normal loss (scrap)	4,800	

The opening work in progress is 60% complete with respect to materials and 40% complete with respect to conversion costs.

The closing work in progress is 70% complete with respect to materials and 50% complete with respect to conversion costs.

All losses (scrap) occurred at end of period and were sold at £0.30 per unit.

REQUIRED

For Period 5

- (a) Calculate the equivalent units of production and the cost per equivalent unit for each element of cost.

(9 marks)

- (b) Prepare the process and abnormal loss accounts.

(11 marks)

(Total 20 marks)

QUESTION 3

The Walker shoe company operates a chain of shoe shops. The shops sell different types of shoes all with identical unit costs and selling prices. Each shop has a manager, who is paid a fixed salary, and sales assistants, who receive a fixed salary plus a sales commission.

The company is considering opening another shop which would be expected to have the following costs for the next period.

Purchase cost of shoes	£8.50 per unit (pair)
Variable overheads	£2.50 per unit (pair)
Salaries (including commission)	£45,000
Rent	£28,000
Other fixed costs	£27,000

Commission to sales assistants to be paid at the rate of 5% of sales revenue.

For the next period the shop is expecting to sell 20,000 pairs of shoes at a selling price of £20 per pair.

REQUIRED

(a) Calculate for the period:

- (i) the breakeven point (in sales units)
- (ii) the margin of safety as a percentage of expected sales
- (iii) the profit.

(7 marks)

The company is also considering discontinuing the sales commission. The effect on the new shop would be to increase the sales assistants' salaries by £19,000 for the next period.

REQUIRED

(b) Advise the company as to the level of sales, for the new shop for the next period, at which this change to salary structure is worthwhile.

(5 marks)

(c) Draw a single profit/volume chart, for the new shop, for the period showing the profit arising if the salary structure included:

- (i) commission paid to sales assistants
- (ii) no commission paid to sales assistants.

Clearly show on the chart the breakeven point and the margin of safety for each salary structure.

(8 marks)

(Total 20 marks)

QUESTION 4

Easy Read Ltd manufactures and sells two books, Book P and Book Q. The books are produced in separate printing departments (Book P in dept A and Book Q in dept B) before being packed into boxes in the dispatch department. The company has provided the following budgeted information:

	Book P	Book Q
Direct material (per book)	£2.50	£3.50
Direct production labour (per 100 books) at £8.00 per hour	2.5 hours	
Direct production labour (per 20 books) at £10.00 per hour		5 hours
Packing boxes	£0.20 each	£0.30 each
Number of books per packing box	5	5
Dispatch dept labour (per box packed) at £8.00 per hour	0.05 hours	0.05 hours

Variable overheads are absorbed at £4 per labour hour in each of the three departments

Fixed overhead absorption (if absorption costing is applied:- based on planned production quantities)

Department A	Absorbed at a rate of £15 per printing machine hour. (A batch of 100 books takes two hours of machine time)
Department B	Absorbed at a rate of £9 per direct labour hour.
Dispatch dept	Absorbed at a rate of £2 per box of books packed

Unit selling price, Book P £12, Book Q £20.

Planned production and sales for the next period are as follows.

	Book P	Book Q
Production (books)	2,000	500
Sales (books)	1,800	450

There is no stock of packed or unpacked books, direct material or packing boxes at the beginning of the period.

At the end of the period it is expected to have 200 book P's unpacked in the dispatch dept. All other production in the period will be packed.

REQUIRED

Produce a single budgeted manufacturing and trading account, which includes closing stock figures, for the period using:

(a) Absorption Costing (14 marks)

(b) Marginal Costing (6 marks)

(Total 20 marks)

QUESTION 5

REQUIRED

(a) Define the term flexible budget.

(2 marks)

A to B Taxi company, which operates a fleet of 5 similar motor vehicles and employs 5 drivers, has prepared the following monthly flexible budget based on the number of paying journeys with customers.

Number of paying journeys (with customers)	1,200	1,300	1,400	1,500
	km	km	km	km
Vehicle travel (with customers)	14,400	15,600	16,800	18,000
Vehicle travel (without customers)	4,800	5,200	5,600	6,000
	£	£	£	£
Income from customers	11,040	11,960	12,880	13,800
Fuel costs	1,728	1,872	2,016	2,160
Driver wages	3,880	4,120	4,360	4,600
Vehicle maintenance	300	600	600	600
Office costs	1,500	1,500	1,500	1,500

Income from customers is generated by charging a fixed rate per journey plus a charge proportional to the distance travelled. The budgeted fixed rate is £2.00 per journey.

During month 1 the following actual data was recorded:

Number of paying journeys (with customers)	1,375
	km
Vehicle travel (with customers)	16,100
Vehicle travel (without customers)	5,700
	£
Income from customers	12,750
Fuel costs	1,905
Driver wages	4,350
Vehicle maintenance	650
Office costs	1,600

REQUIRED

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

- (i) The flexed budget
- (ii) The actual recorded data
- (iii) The variance

(15 marks)

(c) State whether each item of cost is a variable, fixed, semi-variable or stepped-fixed cost.

(3 marks)

(Total 20 marks)

QUESTION 6

A mail-order company hires staff, to process and pack its orders, from two employment agencies (quality staff and reliable recruitment).

The budget, relating to agency staff for a period, is as follows:

	Employment Agency	
	Quality Staff	Reliable Recruitment
Direct labour rate per hour paid to agency	£20.00	£16.00
Time to process and pack each order	12 mins	15 mins
Number of orders (packed in the period)	2,000	2,600

Packing material, for the period, is budgeted to be 2 metres per order at a cost of £8 per 10-metre roll.

Budgeted fixed overheads for the period of £8,400 are absorbed on the basis of total hired labour hours.

Actual results for the period:

	Employment Agency	
	Quality Staff	Reliable Recruitment
Total cost of hired staff	£9,702	£8,640
Total hours worked	441	576
Number of orders completed	2,100	2,400

1100 rolls of packing material were purchased at a total cost of £8,360.

Stock of packing material at start of period	nil
Stock of packing material at end of period	150 rolls

Fixed overheads incurred £9,000.

REQUIRED

(a) Calculate the following variances for the period:

- (i) direct labour rate (for each employment agency)
- (ii) direct labour efficiency (for each employment agency)
- (iii) direct material price (packing material)
- (iv) direct material usage (packing material)

(12 marks)

(b) Calculate the following fixed overhead variances for the period:

- (i) expenditure
- (ii) volume
- (iii) capacity
- (iv) efficiency.

(8 marks)

(Total 20 marks)