

Series 2 Examination 2012

COST ACCOUNTING

Level 3

Tuesday 3 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 purchases a number of different components from an outside supplier. The following information relates to three of these components.

Component Aye

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

Component Bee

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

Component Cee

Order quantity 400 kgs
Purchase price £2.00 per kg
Monthly usage 600 kgs
Safety (buffer) stock 400 kgs
Ordering costs £200 per order
Stock holding costs are 20% of the average stockholding per annum.

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

Order Quantity	Discount
400 kgs	-
600 kgs	5%
800 kgs	7.5%

REQUIRED

- (a) For component Aye calculate:
- (i) the re-order level (1 mark)
 - (ii) the minimum stock control level (2 marks)
 - (iii) the maximum stock control level. (3 marks)
- (b) For component Bee calculate the free stock currently available. (2 marks)
- (c) For component Cee determine the order quantity that would minimise the total annual costs. (8 marks)
- (d) Briefly explain the meaning of:
- (i) re-order level (1 mark)
 - (ii) allocated stock (1 mark)
 - (iii) free stock. (2 marks)

(Total 20 marks)

QUESTION 2

Sole Products Ltd, which produces a single component for the motor industry, has budgeted to make 6,400 units in a year. The components sell for £80 each. The standard unit variable production costs are as follows:

Direct material A	2 kg at £3.00 per kg
Direct material B	4 kg at £1.50 per kg
Direct labour	1.50 hours at £10 per hour
Variable overheads	Absorbed at £3.00 per unit

Fixed factory overheads, absorbed at a predetermined rate based on direct labour hours, are expected to be £48,000 for the year and are expected to occur evenly throughout the year.

The following actual information is available for the first six months of the year:

Opening stock of components	200 units
Sale of components	2,900 units
Closing stock of components	300 units

Actual fixed overheads for the six months were equal to budget. Actual variable costs per unit were as per standard cost.

REQUIRED:

- (a) Calculate for the first six months of the year:
- (i) the actual costs incurred in production (6 marks)
 - (ii) the over/under absorption of fixed production overheads. (3 marks)
- (b) Prepare a trading account, for the first six months of the year in absorption costing format, clearly showing the opening and closing stocks and any over/under absorption of overheads. (7 marks)
- (c) Calculate the trading profit if the company had used the marginal costing format. (4 marks)

(Total 20 marks)

QUESTION 3

A company plans to sell 50,000 units of its single product, in the next period, at a selling price of £16 per unit. Using the existing production process, fixed overheads and net profit for the next period are expected to be £100,000 and £300,000 respectively.

The company is considering a change to its production process. The change would increase the fixed overheads by £60,000 in the next period and reduce the variable costs to £7 per unit. The selling price will remain constant regardless of production process.

Production capacity in both the existing and changed processes would be 80,000 units in the period.

REQUIRED

- (a) For the existing production process, calculate for the next period the expected:
- (i) break-even point in units (4 marks)
 - (ii) margin of safety as a % of sales (1 mark)
 - (iii) contribution sales ratio. (1 mark)
- (b) Advise management, using supporting calculations, whether to change the production process if the sales are 50,000 units in the period. (5 marks)
- (c) Advise management, using supporting calculations, of the sales level (units) at which the changed and existing process profits would be the same. (6 marks)
- (d) Identify three limitations of break-even analysis. (3 marks)

(Total 20 marks)

QUESTION 4

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

Production output	1,000 units
Direct labour per unit	4 hours @ £12 per hour
Fixed overheads	£24,000

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

The actual results for the period were as follows:

Production output	1,125 units
Direct labour	4,800 hours, at a total cost of £56,000 (includes 400 hours idle time caused by machine breakdown)
Fixed overheads	£22,400

REQUIRED

- (a) Calculate for the period the following production ratios:
- (i) efficiency (2 marks)
 - (ii) capacity. (2 marks)
- (b) Calculate for the period the following variances:
- (i) direct labour rate (1½ marks)
 - (ii) idle time (1½ marks)
 - (iii) direct labour efficiency. (3 marks)
- (c) Calculate for the period the following overhead variances:
- (i) expenditure (1 mark)
 - (ii) volume (2 marks)
 - (iv) volume capacity (2 marks)
 - (v) volume efficiency. (2 marks)
- (d) Explain the meaning of the term 'standard hour'. (3 marks)
- (Total 20 marks)**

QUESTION 5

Sinclair Ltd manufactures and sells a single product. The following information is available:

Sales:

The budgeted sales volume for year 2 for the product includes the following:

Month	January	February	March	April	May
Sales units	260	270	280	280	270

The standard selling price is £40 per unit. The sales volume for December of year 1 is expected to be 240 units at the standard price.

20% of sales are expected to be cash sales with the remaining customers allowed one month's credit. It is expected that 5% of credit sales will be bad debts.

Production:

The company manufacture 60% of budgeted sales during the month before the sale and the remaining 40% during the month of the sale.

Costs:

- (i) Direct material will be purchased at £10 per unit of finished product, in the month prior to their use in production, and paid for in the month following purchase.
- (ii) Direct labour will be paid at the rate of £6 per unit of finished product, payable in the month of production. A bonus payment of £3 per unit will be paid on all monthly production in excess of 250 units, paid in the month following production.
- (iii) Fixed production overheads of £20,000 per year, including depreciation of £6,800, are budgeted to be the same each month and are paid in the month they are incurred.
- (iv) Variable production overheads are expected to be £4 per unit payable in the month incurred.
- (v) Variable selling expenses are expected to be £5 per unit payable in the month of sales.

Cash:

The company expects to have a bank overdraft balance of £1,966 at the start of year 2.

REQUIRED

- (a) Prepare the following budgets for each of the months January, February and March:
 - (i) material purchases (units and £'s) (4 marks)
 - (ii) cash. (12 marks)
- (b) Briefly explain any **two** benefits that are expected to accrue from the use of budgets. (4 marks)

(Total 20 marks)