

Cost Accounting

ASE3017

Level 3

Tuesday 19 November 2013

Time allowed: 3 hours

Information

- There are 5 questions in this examination.
 - Total marks available: 100
 - All questions carry equal marks.
 - Please ensure your answers are written clearly, or marks may be lost.
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Instructions

- Do NOT open this paper until you are told to do so by the supervisor.
 - Answer **all questions**.
 - Write your answers in blue or black ink/ballpoint. You can only use pencil 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.
 - 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.
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Question 1

Sole Products Ltd manufactures its single product in batch sizes of 80 units. The customer requirement for the next period is 3,600 units.

Each unit of the product contains three materials (A, B and C) that are processed together in a weight ratio of 3:1:1 respectively.

Before processing, each material goes through a cleaning process. This results in a weight loss of 25% for material A and 20% for materials B and C. No other losses occur during the manufacturing process.

The following further information is available.

- | | | |
|------|--|----------------|
| (1) | Finished weight of completed unit | 10kg |
| (2) | Material A costs | £4 per kg |
| (3) | Material B costs | £3 per kg |
| (4) | Material C costs | £2 per kg |
| (5) | Product inspection rejection rate | 10% |
| (6) | Direct labour | £400 per batch |
| (7) | Fixed production overheads for the period are | £40,000 |
| (8) | Rejected products can also be sold at | £20 per reject |
| (9) | Material waste, due to the cleaning process, is disposed of at a cost of | £2 per kg |
| (10) | No stocks of finished products are kept | |
| (11) | Stock of Material A at the start of the next period is expected to be | 5,000kg |
| (12) | Stock of Material B at the start of the next period is expected to be | 1,000kg |
| (13) | Stock of Material C at the start of the next period is expected to be | 1,200kg |
| (14) | At the end of the next period the company intends to reduce material stock levels by | 20% |
| (15) | Selling price | £100 per unit |

Required

Calculate for the next period:

- | | | | |
|-----|-------|--|-----------|
| (a) | (i) | the total number of product batches to be manufactured | (2 marks) |
| | (ii) | the total weight of materials A, B and C to be introduced into the manufacturing process | (6 marks) |
| | (iii) | the total weight of materials A, B and C to be purchased from the supplier | (3 marks) |
| | (iv) | the total income received from the sale of inspection rejects | (1 mark) |
| | (v) | the total cost of disposing of the material waste. | (2 marks) |
| (b) | | Prepare a manufacturing profit and loss statement for the next period. | (6 marks) |

(Total 20 marks)

Question 2

Flexit Ltd has prepared the following monthly production overhead budget for its cost centre M15.

Units produced	2,500	3,000	3,500	4,000
	£	£	£	£
Indirect materials	12,500	14,700	17,150	19,600
Indirect labour	7,500	9,000	11,025	12,600
Maintenance	7,750	9,000	10,250	11,500
Depreciation	3,440	3,440	3,440	3,440
Supervision	4,000	5,000	5,000	6,000

The following budgeted information is also provided.

The variable indirect material cost per unit reduces by 2% for production of 3,000 units and over.
The variable indirect labour cost per unit increases by 5% for production of 3,500 units and over.
Maintenance overheads consist of a proportionately variable cost plus a fixed amount.
Supervision is a stepped cost.

During Month 1, 3,200 units were produced, and the following costs were incurred.

	£
Indirect materials	16,680
Indirect labour	9,100
Maintenance	9,800
Depreciation	3,540
Supervision	4,800

Required

- (a) Prepare a statement for Month 1 for cost centre M15, showing for each item of cost, the:
- (i) flexed budget
 - (ii) actual cost
 - (iii) expenditure variance.
- (14 marks)
- (b) Briefly explain the main difference between flexible and fixed budgets.
- (4 marks)
- (c) State the main objective for preparing flexible budgets.
- (2 marks)
- (Total 20 marks)**

Question 3

Dual Products Ltd manufactures and sells two products (Product Tee and Product Pee).

The standard production budgets and selling prices, for the two products, for Year 14, are as follows.

	Product Tee	Product Pee
Selling price per unit	£40.00	£80.00
Direct material at £20 per kg	0.52 kg	1.60 kg
Direct labour at £12 per hour	0.80 hours	1.50 hours
Fixed production overheads per unit	£10.00	£12.00
Budgeted output	6,000 units	2,000 units

Fixed production overheads are absorbed on a budgeted unit basis.
Fixed administration overheads are budgeted at £28,500 for the year.

Required

- (a) Calculate the budgeted standard production cost per unit for each product. (3 marks)
- (b) Calculate the contribution to sales ratio for each product and for Dual Products overall. (3 marks)
- (c) Calculate the break-even revenue based on the budgeted sales mix. (3 marks)
- (d) Calculate for Year 14 the profit based on the budgeted sales mix. (2 marks)

The company is considering increasing its advertising for Product Pee. Market research suggests that this would generate a 20% increase in sales of Product Pee but would reduce the sales of Product Tee by 10%.

The additional advertising would increase the fixed cost by £4,500 for the year.

Required

- (e) Assuming the company increases the advertising expenditure, calculate:
 - (i) the revised budgeted overall contribution to sales ratio for Dual Products (1 mark)
 - (ii) the revised break-even revenue. (5 marks)
- (f) Advise the company, using supporting calculations, whether to increase the advertising for Product Pee. (3 marks)

(Total 20 marks)

Question 4

Sinclair Ltd produces a single product and uses a standard absorption costing system.

The production department budgets for the next period include the following.

Production output	1,600 units
Direct labour per unit	4 hours @ £12 per hour
Fixed overheads	£51,200

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

The actual results for the period were:

Production output	1,680 units
Direct labour	7,200 hours, at a total cost of £84,400 (includes 800 hours idle time caused by machine breakdown)
Fixed overheads	£48,800

Required

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

- (i) efficiency
- (ii) capacity
- (iii) volume (activity).

(6 marks)

(b) Calculate the following variances for this period:

- (i) direct labour rate
- (ii) idle time
- (iii) direct labour efficiency.

(7 marks)

(c) Calculate the following fixed overhead variances for this period:

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

(7 marks)

(Total 20 marks)

Question 5

Makit Ltd operates separate accounting ledgers for its financial and cost accounting systems. For the period just ended the profits shown in the two sets of accounts have been reconciled by identifying the differences shown in the reconciliation statement set out below.

	£	£	
Profit as per cost accounts		80,000	
Adjust profit by:			
Adding notional rent costs (not included in financial accounts)		3,400	
Deducting increase in under-absorbed production overhead (carried forward in the cost accounts)		(2,500)	
Differences in stock valuation			
Deducting opening stock of raw materials	(800)		
Deducting closing stock of raw materials	(400)		
Adding opening stock of finished goods	2,000		
Deducting closing stock of finished goods	<u>(2,500)</u>		
		<u>(1,700)</u>	
Profit as per financial accounts		<u>79,200</u>	

The stock accounts appeared in the financial accounts as follows:

Raw Material Stock Account			
	£		£
Opening balance	30,000	Work-in-progress	85,000
Purchases	<u>80,000</u>	Closing balance	<u>25,000</u>
	<u>110,000</u>		<u>110,000</u>
Finished Goods Stock Account			
	£		£
Opening balance	70,000	Cost of goods sold	240,000
Cost of goods produced	<u>250,000</u>	Closing balance	<u>80,000</u>
	<u>320,000</u>		<u>320,000</u>

Further information for the period.

- (1) Direct wages totalled £62,500.
- (2) The under-absorbed production overhead balance, at the beginning of the period in the cost accounts, was £700.
- (3) Production overhead expenditure totalled £105,000.
- (4) There was no work-in-progress either at the beginning or at the end of the period.

Required

(a) Prepare the following control accounts in the cost ledger for the period.

- | | |
|----------------------------|-----------|
| (i) Raw material stock. | (5 marks) |
| (ii) Production overheads. | (6 marks) |
| (iii) Work-in-progress. | (4 marks) |
| (iv) Finished goods stock. | (5 marks) |

(Total 20 marks)