



ICM

DECEMBER 2017

COST ACCOUNTING

Instructions to candidates:

- a) Time allowed: Three hours (plus an extra ten minutes' reading time at the start – do not write anything during this time)
- b) Answer any FIVE questions
- c) All questions carry equal marks. Marks for each question are shown in []
- d) Non-programmable calculators are permitted in this examination

1. There are two broad categories of product costing methods: these are **specific order costing** and **continuous operation/process costing**.

- a) Explain the nature of **specific order costing**, giving examples. [6]
- b) Explain **continuous operation/process costing** and give examples. [10]
- c) Under which broad category would you place:
 - i a meal
 - ii a roof repair [4]

2. The following data relates to three employees working for Carriers Ltd who operate a premium bonus system. A bonus is paid equal to half the time saved, i.e. the Halsey system.

Employee	A	B	C
Time allowed (hours)	40	40	40
Time taken (hours)	36	37	41
Basic hourly rate	£15.00	£15.00	£15.00

TASKS

- a) Calculate the bonus payment for EACH of the employees A, B and C. [6]
- b) What are the benefits of an incentive scheme:
 - i to the company
 - ii to the employee [8]
- c) Distinguish between perpetual inventory and continuous stocktaking. [6]

3. The cost card for Mechanix plc reveals the standard cost of making one unit as follows:

Direct material	4 kilos at £8 per kilo
Direct wages	6 hours at £19 per hour
The actual cost of a batch of 1,000 units produced was:	
Direct material	£33,200 (4,530 kilos)
Direct wages	£110,820 (5,900 hours)

TASKS

- a) Calculate the following:
 - i The material price variance [2]
 - ii The material usage variance [2]
 - iii The total material cost variance [1]
 - iv The labour rate variance [2]
 - v The labour efficiency variance [2]
 - vi The total labour cost variance [1]
 - vii The total cost variance [2]
- b) Suggest possible causes of the material price and usage variances. [4]
- c) Distinguish between an attainable standard and an ideal standard. [4]

continued overleaf

4. Cortex Manufacturing has three production cost centres D, E and F, and one service cost centre G which is the maintenance department. The budgeted overhead expenditure for the year ended 31 December 2017 is as follows:

	£000
Depreciation of production equipment	1,050
Employer's liability insurance	300
Heating and lighting	200
Indirect labour	900
Rent and business rates	800
Staff welfare expenses	100

	3,350

Other data/information is as follows:

Value of production equipment:

Cost centre D	£2,000,000
Cost centre E	£1,000,000
Cost centre F	£500,000
Cost centre G	£500,000

Floor area:

Cost centre D	80,000 sq.m
Cost centre E	60,000 sq.m
Cost centre F	50,000 sq.m
Cost centre G	10,000 sq.m

Number of employees:

Cost centre D	100
Cost centre E	80
Cost centre F	50
Cost centre G	20

Overheads to be allocated to cost centre G (maintenance) amount to £114,750.

Cost centre G is to be apportioned 50% to D, 30% to E and 20% to F.

Budgeted direct labour hours:

Cost centre D	180,000
Cost centre E	150,000
Cost centre F	90,000

TASKS

- a) Prepare an OVERHEAD ANALYSIS table in the following suggested format:

[12]

Expenditure Type	Dept. D £	Dept. E £	Dept. F £	Dept. G £ Maintenance	TOTAL £	BASIS
Depreciation					1,050,000	Value
Emps. Liab.					300,00	etc.
etc.	etc.					

- b) Using direct labour hours, calculate to the nearest £ the overhead absorption rates for EACH of the THREE production cost centres. [4]
- c) Prepare a cost statement for a product which has a prime cost of £880, and takes 5 hours in each of the cost centres D, E and F. [4]

5. As cost accountant at Salaam Ali, you must advise on the performance of a product which your company manufactures, and investigate the possible consequences of various alternative proposals. The draft budgeted data for the product in the coming year is:

Variable cost per unit	£
Direct material	60
Direct wages	40
Overheads	60

Total variable costs	160
Fixed costs allocated to the product	£2,500,000
Budgeted production and sales	100,000 units
Maximum possible production	140,000 units
Budgeted selling price	£210 per unit

TASKS

- Calculate the following:
 - The budgeted profit [3]
 - The estimated break-even point (in units) [2]
 - The total absorption cost per unit [2]
 - The company can arrange to 'buy in' this product at a cost of £165 each. In the short term the company would have no use for the equipment and resources they use to make this product. Would you advise them to make or buy? [4]
 - Alternatively, if £10 extra per unit was spent on improving the quality and presentation of the product and £300,000 spent on advertising, the marketing department predict that they could sell 124,000 units at the existing budgeted selling price. Calculate the resulting profit or loss. [4]
 - Alternatively, the purchasing department advise you that by negotiating a long-term contract with the suppliers of direct material, a 10% saving on purchase costs can be obtained. Furthermore, the human resources department estimate that by introducing a premium bonus system, they can save £2 per unit on direct wages, AND you estimate that £4 per unit can be saved on variable overheads. Calculate the resulting profit or loss. [5]
6. Precious Ltd has a limited capital budget available for investment in suitable projects this year and has short-listed two possible choices. Details are as follows:

	Project Ex	Project Zed
Capital cost	£2,000,000	£2,000,000
Expected life	5 years	5 years
Residual value	nil	nil
Budgeted cash inflows:	£000	£000
Year 1	600	700
Year 2	1,000	1,100
Year 3	1,500	1,800
Year 4	1,000	900
Year 5	700	400

The cost of capital to Precious Ltd is 8%.

Extracts from NPV tables are as follows:

Year	8%	9%	10%
1	.926	.909	.893
2	.857	.826	.793
3	.794	.751	.712
4	.735	.683	.567
5	.630	.621	.507

TASKS

- Calculate the payback period for EACH project. [4]
- Calculate the accounting rate of return for EACH project. [4]
- Calculate the NPV for EACH project. [6]
- Which project would you recommend and why? [2]
- In the context of capital investment, explain the term **sensitivity analysis**. [4]

7. Write notes on FOUR of the following:
- a) Normal loss
 - b) Equivalent units
 - c) Contract costing characteristics
 - d) Goods received note
 - e) Economic Order Quantity (EOQ)
 - f) Using FIFO to value issues from stock
 - g) Backflush costing

[5 each]