



ICM

MARCH 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. a) Decisions on major capital expenditure projects require very careful consideration. Why is this? [4]
b) Two techniques available to help in evaluating proposed investments are **payback** and **discounted cash flow**. Explain clearly the merits and criticisms of these two techniques. [12]
c) Explain the use of **sensitivity analysis** in investment appraisal. [4]

2. The following budgeted information relates to Costan plc, a manufacturer:

OVERHEADS	£000
Repairs and maintenance of machines	225
Power consumption	300
Business rates and building insurance	900
Heating and lighting	300
Personnel expenses	150
Production Manager's expenses	450
Supervisors' salaries:	
Department A	75
Department B	60
Department C	60
Indirect materials:	
Department A	45
Department B	30
Department C	15
Depreciation of machines	375
BASIC HOURLY WAGE RATES:	
Department A	£18 per hour
Department B	£16 per hour
Department C	£14 per hour

OTHER INFORMATION:

	A	B	C
Floor area (sq. m.)	20,000	20,000	10,000
Machine value (£000)	750	450	300
Number of employees	100	50	50
Power consumption	50%	30%	20%
Direct labour hours	163,125	84,375	83,437.5

TASKS

- a) Prepare an overhead analysis statement to show: – six columns – **expenditure type**, e.g. repairs and maintenance of machines, **3 departments' costs**, i.e. A, B and C, **total overheads** and **bases of analysis**, e.g. area. [10]
- b) Calculate the overhead absorption rates (using direct labour hours method) for EACH of the three departments. [6]
- c) A product uses £620 worth of material, and takes 5 hours in each of departments A, B and C. Calculate the production cost of the product. [4]

continued overleaf

3. The following is the first draft budgeted data in respect of a new product which is being 'brought to the market' next year:

Production/sales (units)	50,000
Variable costs per unit:	
Direct labour	£30
Direct material	£40
Overheads	£30
Suggested selling price per unit	£150
Fixed costs to be absorbed by the product are estimated to be £1,000,000.	

TASKS

- Calculate the budgeted profit based on the first draft budget. [3]
- Calculate the budgeted break-even point, based on the first draft budget. [3]
- Calculate what the profit would be if the selling price was increased to £160, and 46,000 units were made and sold. [4]
- Calculate what the profit would be if the selling price was decreased to £140, and 57,000 units were made and sold. [4]
- Calculate what the profit would be if the product was made to a higher quality and design. This would increase the total variable cost per unit by 10%. It is felt that the selling price could be set at £160, and that 45,000 units could be sold. [4]
- Explain which of the above scenarios is best for the business. [2]

4. Lucan Ltd is a manufacturing company which uses a standard costing system to control production costs. The standard costs for a product are as follows:

Materials – 5 kilos at a standard cost of £6 per kilo
 Grade A labour – 4 hours at a standard cost of £20 per hour
 Grade B labour – 10 hours at a standard cost of £10 per hour
 The actual cost of a batch of 1,000 products has been recorded as follows:
 Materials – 5,420 kilos at a cost of £31,200
 Grade A labour – 3,740 hours at a cost of £78,540
 Grade B labour – 10,900 hours at a cost of £103,550

TASKS

- Calculate the following:
 - The material price and usage variances [4]
 - The labour rate and efficiency variances (Grade A labour) [5]
 - The labour rate and efficiency variances (Grade B labour) [5]
 - Explain, giving examples, the term **interrelationship of variances**. [6]
5. The following information is provided by the Personnel Dept. In 2015 the number of employees replaced was 35. The average total employees was 500. In 2016 the number of employees replaced was 61. The average total employees was 610.

TASKS

- Calculate the labour turnover ratios (%) for EACH year, i.e. 2015 and 2016. [6]
- Suggest reasons for the change in labour turnover ratio % between 2015 and 2016. [6]
- What action do you think should be taken in the light of the change in labour turnover? [8]

6. The following are the stock movements for stock item Omega13579:

	Receipts	Issues
01 Jan.	1,500 at £5.00 each	
07 Jan.	2,000 at £5.50 each	
10 Jan.		2,500
28 Jan.	2,000 at £6.00 each	
31 Jan.		2,500

There was no opening stock.

TASKS

- Prepare stock cards for item Omega13579, showing the value of EACH of the issues, and the value of closing stock. Use EACH of the following stock pricing methods:
 - FIFO
 - LIFO
 - AVCO [14]
- Explain the term **EOQ** (Economic Ordering Quantity). [6]

7. Write notes to EXPLAIN clearly FOUR of the following:
- a) Normal losses
 - b) Abnormal gain
 - c) Equivalent units
 - d) Activity based costing (ABC)
 - e) Target costing
 - f) Backflush costing
 - g) Value of work certified

[5 each]