



ICM

DECEMBER 2016

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. Traditionally, in developing product costs, overheads are shared in some equitable way known as overhead absorption. This uses an Overhead Absorption Rate based on, for example machine hours or direct labour hours. A more recent approach is Activity Based Costing (ABC) which is considered superior to absorption costing.
- a) Explain the nature of ABC and why it may be preferable to absorption costing. [8]
 - b) In the context of ABC explain the terms **cost driver** and **cost pool**. [6]
 - c) Give TWO examples of cost drivers and indicate which costs would be influenced or 'driven' by cost drivers. [6]

2. New Technology plc is about to bring a new product to the market. The following budgeted data is provided:

	£
Direct material cost per unit	30
Direct labour cost per unit	30
Variable overhead cost per unit	50
Selling price per unit	200
Fixed overhead cost	420,000

Planned production and sales: 12,000 units

Maximum possible output: 16,000 units

TASKS

- a) Calculate the original budgeted profit. [3]
- b) Calculate the original budgeted break-even point. [2]
- c) The marketing manager thinks that if he was allowed to spend an extra £100,000 on publicity, the company would be able to sell 14,000 units at a price of £210 per unit. Calculate the profit. [3]
- d) The project manager thinks that if she implemented a cost reduction programme she could reduce direct materials by 10%; direct labour by 5%; and variable overheads by 5%. She also believes that a saving of £30,000 can be achieved on fixed overheads. Calculate the profit based on selling 12,000 units at £200 each. [5]
- e) Explain which option you would recommend. [3]
- f) Explain what you understand by the term **margin of safety**. [4]

continued overleaf

3. Crystal Merchandise Ltd has the following actual figures for December 2016 and forecast data for the first three months of its budget cycle for January-March 2017:

	2016	2017		
	December	January	February	March
	£	£	£	£
Sales	120,000	140,000	180,000	160,000
Purchases	70,000	110,000	100,000	90,000
Overheads	24,000	24,000	26,000	26,000
Wages	20,000	21,000	21,000	22,000

Other Information:

- 50% of sales are on a cash basis, and 50% are on a credit basis
- Debtors are given one month's credit
- Suppliers give one month's credit
- Overheads are paid one month in arrears
- Overheads include £4,000 in respect of the depreciation of fixed assets
- Wages are paid in the month in which they are incurred
- New equipment costing £80,000 will be paid for in January 2017
- In February 2017 proceeds of £5,000 from the sale of assets will be received
- A Government grant of £10,000 is expected to be received in February 2017
- The bank balance is predicted to be £18,000 on 1st January 2017

TASKS

- a) Prepare a receipts schedule for the period January-March 2017 (3 months). [4]
- b) Prepare a payments schedule for the period January-March 2017. [4]
- c) Prepare a cash budget for the period January-March 2017. [6]
- d) Looking at the cash budget, what advice would you give to the directors? [6]
4. Salim Products Ltd uses standard costing for product cost control. The standard cost of making one unit is as follows:

Direct material	4 kilos at £6 per kilo
Direct wages	2 hours at £16 per hour
The actual cost of a batch of 1,000 units was:	
Direct material	£24,360 (4,200 kilos)
Direct wages	£32,420 (1,970 hours)

TASKS

- a) Calculate the following:
- i The material price variance
 - ii The material usage variance
 - iii The labour rate variance
 - iv The labour efficiency variance
 - v The total cost variance [2 each]
- b) Outline the possible causes of the material price and usage variances. [4]
- c) Explain the main benefits of operating a standard costing system. [6]

5. Rand Rivets plc has a limited capital budget available for investment in suitable projects, and has short-listed two possible choices. Details are as follows:

	Project A	Project B
Capital cost	£2,200,000	£2,300,000
Expected life	5 years	5 years
Residual value	nil	nil
Budgeted cash inflows:	£000	£000
Year 1	200	300
Year 2	800	900
Year 3	1,400	1,500
Year 4	700	600
Year 5	400	400

The cost of capital to Rand Rivets is 9%

Extracts from NPV tables are as follows:

Year	8%	9%	10%
1	.926	.917	.909
2	.857	.841	.826
3	.794	.772	.751
4	.735	.708	.683
5	.630	.650	.621

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. [8]
- Explain the term '**post audit review**' within the context of capital investment appraisal. [4]

6. AgriCult plc makes a chemical product and uses process costing. The following details relate to the month of December 2016:

PROCESS ONE Input 5,000 litres of chemical A at £0.90 per litre
 150 direct hours at £8 per hour
 Overhead cost £2,650
 4,750 litres transferred to Process Two

In Process One there is a normal loss of 5% of input – it has no scrap value.

PROCESS TWO Input 4,750 litres from Process Two
 1,150 litres of chemical B at £1.50 per litre
 75 direct hours at £10.00 per hour
 Overhead cost £3,900
 5,605 litres were transferred to finished stock

There was no work in progress

In Process Two there is a normal loss of 5% of input – it has no scrap value.

TASKS

- Complete the process account for Process One. [6]
- Complete the process account for Process Two. [6]
- Distinguish between a normal and abnormal loss. [4]
- Explain the term **equivalent units**. [4]

7. Write notes on FOUR of the following:

- FIFO (first in first out)
- Economic order quantity (EOQ)
- Functional budget
- Master budget
- Buffer stock
- Target costing

[5 each]