

Paper 4

Accounting for Costs

ACCA CERTIFIED ACCOUNTING TECHNICIAN EXAMINATION

INTERMEDIATE LEVEL

PILOT PAPER – JUNE 2004

QUESTION PAPER

Time allowed **2 hours**

This paper is divided into two sections

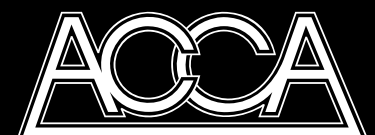
Section A ALL TWENTY questions are compulsory and MUST be answered

Section B ALL FOUR questions are compulsory and MUST be answered

Do not open this paper until instructed by the supervisor

This question paper must not be removed from the examination hall

The Association of Chartered Certified Accountants



Section A – ALL TWENTY questions are compulsory and MUST be attempted

Each question in Section A carries 2 marks.

1 Which one of the following may be included in the cost accounts but excluded from the financial accounts?

- A Depreciation of equipment
- B Distribution expenses
- C Factory manager's salary
- D Notional rent.

2 What are conversion costs?

- A Direct costs only
- B Indirect costs only
- C Production costs excluding direct materials
- D Rework costs.

3 A particular cost is fixed in total for a period.

What is the effect on the cost per unit of a reduction in activity of 50%?

- A Cost per unit increases by 50%
- B Cost per unit reduces by 50%
- C Cost per unit increases by 100%
- D Cost per unit is unchanged.

4 The table shows the total of Cost Y at different production levels of Product X:

<i>Units of Product X</i>	<i>Total Cost Y (£000)</i>
50	60
100	60
150	60
200	90
250	90

What could have been the cause of the increase in cost?

- A Increased fuel and maintenance costs for delivery vehicles
- B Increased storage requirements
- C Loss of discounts on raw materials
- D Pay increase for direct labour.

- 5 The following are statements relating to raw material pricing in a situation where raw material prices are rising consistently.
1. Production costs will be lower using weighted average pricing rather than LIFO.
 2. Profit will be higher using LIFO pricing rather than FIFO.
 3. Stock values will be lower using FIFO pricing rather than weighted average.

Are the statements true or false?

- A Statement 1 is true but Statements 2 and 3 are false
- B Statements 1 and 2 are true but Statement 3 is false
- C Statements 1 and 3 are true but Statement 2 is false
- D Statements 2 and 3 are true but Statement 1 is false.

Questions 6 and 7 are based on the following data:

Day	Transaction	Units	Unit Price (£)	Value (£)
1	Balance b/f	100	5.00	500
3	Issue	40		
4	Receipt	50	5.50	275
6	Receipt	50	6.00	300
7	Issue	70		

6 If the first-in, first-out method of pricing is used what is the value of the issue on Day 7?

- A £350
- B £355
- C £395
- D £420.

7 If the last-in, first-out method is used what is the value of the issue on Day 7?

- A £350
- B £395
- C £410
- D £420.

8 In an interlocking system, what would be the entry for the issue of indirect material from stock?

Account debited *Account credited*

- A Material stock Production overhead
- B Material stock Work-in-progress
- C Production overhead Material stock
- D Work-in-progress Material stock.

- 9 340 litres of Chemical X were produced in a period. There is a normal loss of 10% of the material input into the process. There was an abnormal loss in the period of 5% of the material input.

How many litres of material were input into the process during the period?

- A 357 litres
 - B 374 litres
 - C 391 litres
 - D 400 litres.
- 10 A company orders a particular raw material in order quantities of 250 units. No safety stock is held, the stockholding cost is £3 per unit per annum and the annual demand is 2,500 units.

What is the total annual stockholding cost of the material?

- A £375
 - B £750
 - C £3,750
 - D £7,500.
- 11 **Which of the following is NOT relevant to the calculation of the economic order quantity of a raw material?**
- A Ordering cost
 - B Purchase price
 - C Stockholding cost
 - D Usage.

- 12 Employee A works a normal working week of 36 hours at a basic rate of £3·60 per hour. A premium of 50% of the basic hourly rate is paid for all hours worked in excess of 36 hours per week. Employee A worked for a total of 42 hours last week. The reasons for the overtime were:

- machine breakdown 4 hours
- completion of a special job at the request of a customer 2 hours

How much of Employee A's earnings for the last week should be treated as direct wages?

- A £129·60
- B £140·40
- C £151·20
- D £162·00.

- 13 A new machine has an estimated five year life and a nil disposal value at the end of its life. Depreciation methods being considered are:
- (i) Reducing balance at 25% per annum
 - (ii) Straight-line

Which of the following statements is correct?

- A Depreciation in each year would be greater using the reducing balance method
 - B Depreciation in each year would be greater using the straight-line method
 - C Depreciation would be greater in year 1 but less in year 5 if the reducing balance method, rather than the straight-line method, was used
 - D Depreciation would be greater in year 1 but less in year 5 if the straight-line method, rather than the reducing balance method, was used.
- 14 A company had the following budgeted and actual production overhead costs in its two production cost centres, Machining and Assembly:

	<i>Budget</i>	<i>Actual</i>
Machining	£210,000	£212,000
Assembly	£136,000	£134,000

Which statement is true?

- A From the data available it is not possible to determine overhead over/under absorption
 - B Machining overheads were over-absorbed: Assembly overheads were under-absorbed
 - C Machining overheads were over-absorbed: Assembly overheads were over-absorbed
 - D Machining overheads were under-absorbed: Assembly overheads were over-absorbed.
- 15 **What is the correct entry in the cost ledger to record the over-absorption of production overhead?**

<i>Debit</i>	<i>Credit</i>
A Over-absorbed production overhead a/c	Production overhead a/c
B Over-absorbed production overhead a/c	Work-in-progress a/c
C Production overhead a/c	Over-absorbed production overhead a/c
D Work-in-progress a/c	Over-absorbed production overhead a/c

16 **What basis is used to credit abnormal losses in a process account?**

- A Raw material cost per unit
- B Nil value
- C Production cost per unit of actual output
- D Production cost per unit of normal output.

17 A company manufactures Chemical Z in a single process. No losses occur in the process. There was no work-in-progress at the start of a period during which 300 litres of raw material were input to the process. 250 litres of the finished chemical were output from the process in the period. The work-in-progress remaining was 100% complete with respect to materials and 50% complete with respect to conversion costs

What were the equivalent units for closing work-in-progress at the end of the period?

	<i>Material</i>	<i>Conversion costs</i>
A	25 litres	25 litres
B	25 litres	50 litres
C	50 litres	25 litres
D	50 litres	50 litres.

Questions 18 and 19 are based on the following data:

Sales units	128,000
Sales revenue	£640,000
Variable costs	£384,000
Fixed costs	£210,000

18 What sales revenue is required to earn a profit of £65,000?

- A** £458,333
- B** £590,000
- C** £687,500
- D** £705,000.

19 How many sales units are required to earn a profit of £52,000?

- A** 52,400 units
- B** 87,333 units
- C** 131,000 units
- D** 160,500 units.

20 A company manufactures and sells four products. Sales demand cannot be met owing to a shortage of skilled labour. Details of the four products are:

	<i>Product A</i>	<i>Product B</i>	<i>Product C</i>	<i>Product D</i>
Sales demand (units)	1,500	2,000	1,800	1,900
Contribution (£/unit)	2.80	2.60	1.90	2.40
Contribution/sales (%)	30	40	50	45
Skilled labour (hours/unit)	1.4	1.2	0.9	1.0

In what order should the products be made in order to maximise profit?

- A** Product A, Product B, Product D, Product C
- B** Product B, Product D, Product C, Product A
- C** Product C, Product D, Product B, Product A
- D** Product D, Product B, Product C, Product A.

Section B – ALL FOUR questions are compulsory and must be attempted

1 A company manufactures a single product with a selling price of £28 per unit. Variable production costs per unit of product are:

Direct material	£6.10
Direct labour	£5.20
Variable overhead	£1.60

Fixed production overheads are £30,000 per month. Administration overheads are semi-variable in nature: variable costs are 5% of sales and fixed costs are £13,000 per month.

Production and sales quantities over a two month period are:

	<i>Production</i>	<i>Sales</i>
Month 1	4,000 units	3,500 units
Month 2	3,600 units	3,800 units

There is no finished goods stock at the beginning of Month 1.

The company has prepared the following profit statement for each of the two months using the absorption costing method:

Profit statement

	<i>Month 1</i>		<i>Month 2</i>	
	£	£	£	£
Sales		98,000		106,400
Production cost of sales:				
Opening stock		–		10,200
Cost of production	81,600		76,440	
Closing stock*	(10,200)	71,400	(6,370)	80,270
Gross profit		26,600		26,130
Administration overhead		17,900		18,320
Net profit		8,700		7,810

* stock valuation: end Month 1 £81,600 × (500 ÷ 4,000 units)
 end Month 2 £76,440 × (300 ÷ 3,600 units)

Required:

(a) Prepare a profit statement for each of the two months using the marginal costing method. (10 marks)

(b) Provide a reconciliation of the absorption costing and marginal costing profits for Month 2, supported by a full explanation of the difference. (7 marks)

(17 marks)

- 2 A company manufactures carpet for the hotel industry. No finished stocks are carried as the company only manufactures specifically to customer order. At the end of Month 6, one incomplete job (Job X124) remained in progress. Production costs incurred on the job to the end of Month 6 were:

Direct material	£7,220
Direct labour	£6,076
Production overhead	£10,416

During Month 7, the company accepted two further jobs (Jobs X125 and Job X126) and incurred prime costs as follows:

	<i>Job X124</i>	<i>Job X125</i>	<i>Job X126</i>
Direct material issued from stores	£6,978	£18,994	£12,221
Direct material returned to stores	Nil	(£700)	(£2,170)
Direct material transfers	Nil	£860	(£860)
Direct labour hours	780	2,364	1,510

Direct labour is paid at a rate of £7.00 per hour. Production overheads are absorbed at a rate of £12.00 per direct labour hour.

During Month 7, Jobs X124 and X125 were completed. On completion of a job, 20% of the total production cost is added in order to recover distribution, selling and administration costs. The amounts invoiced to customers during Month 7 for the completed jobs were:

Job X124	£60,000
Job X125	£79,000

Required:

- (a) For each of the jobs calculate the following total costs:

- | | |
|----------------------------|-----------|
| (i) direct material; | (3 marks) |
| (ii) direct labour; | (3 marks) |
| (iii) production overhead. | (3 marks) |

- (b) Calculate the total cost and profit/(loss) of each of Job X124 and Job X125. (4 marks)

(13 marks)

- 3** Chemicals X, Y and Z are produced from a single joint process. The information below relates to the period just ended:
- Input to process: Direct materials 3,200 litres, cost £24,000
 Direct labour £48,000
 Factory overheads are absorbed at 120% of prime cost
- Output from process: Chemical X 1,440 litres
 Chemical Y 864 litres
 Chemical Z 576 litres
 Scrap 10% of input, credited to the process account at sales value as it occurs
- Selling prices: Chemical X £100 per litre
 Chemical Y £80 per litre
 Chemical Z £60 per litre
 Scrap £16 per litre

Required:

Calculate for the period just ended:

- (a) the joint process costs to be apportioned to the joint products; (4 marks)
- (b) the total sales value of the output of the three products; (2 marks)
- (c) the share of the joint process costs charged to Chemical X, using the volume of output method of apportionment; (3 marks)
- (d) the share of the joint process costs charged to Chemical Y, using the sales value method of apportionment. (3 marks)

(12 marks)

- 4 (a) Distinguish between net profit and net cash flow and explain the rationale for discounting cash flows in the appraisal of capital investment project viability. (6 marks)
- (b) A company is considering an investment in new equipment. The company has a cost of capital of 12% per annum.

Required:

Calculate:

- (i) the net present value (NPV); (3 marks)
- (ii) the internal rate of return (IRR); (6 marks)
- (iii) the discounted payback period, (3 marks)

of the investment project, using the following information as appropriate:

<i>Year</i>	<i>Cash flow</i> <i>(£000)</i>	<i>Discount</i> <i>Factor (12%)</i>	<i>Discount</i> <i>Factor (20%)</i>
0	(460)	1.000	1.000
1	50	0.893	0.833
2	140	0.797	0.694
3	180	0.712	0.579
4	250	0.636	0.482
5	160	0.567	0.402
6	(40)	0.507	0.335

(18 marks)

End of Question Paper