

# Accounting for Costs

ACCA CERTIFIED ACCOUNTING TECHNICIAN EXAMINATION

INTERMEDIATE LEVEL

THURSDAY 9 DECEMBER 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

Paper T4



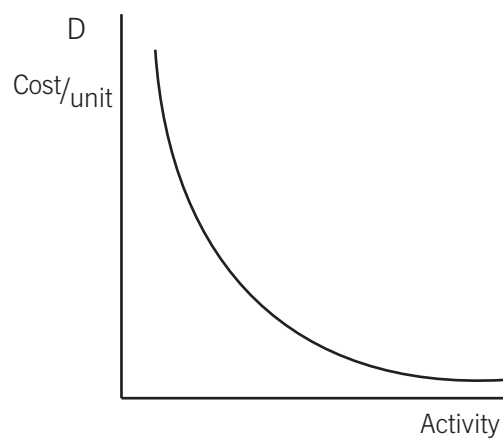
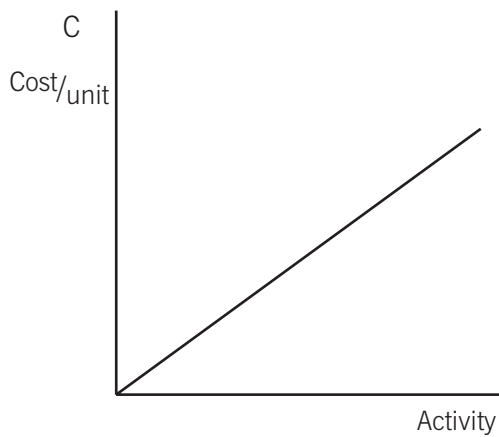
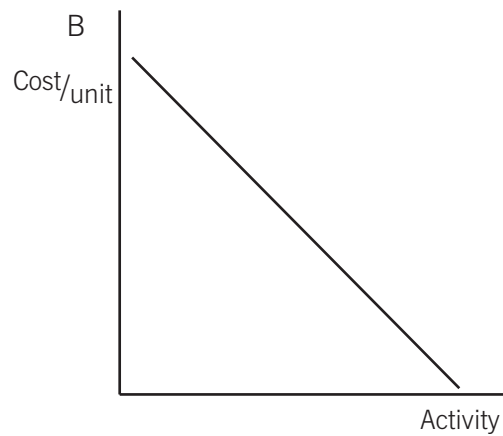
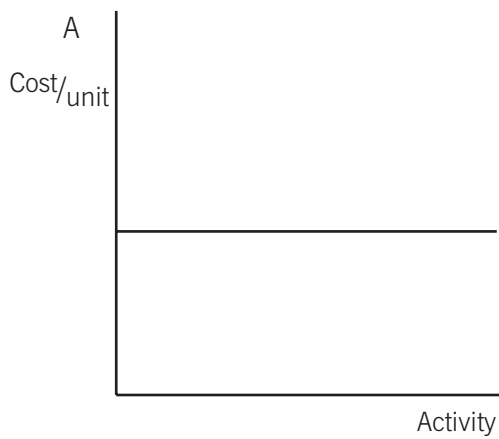
**Section A – ALL TWENTY questions are compulsory and MUST be attempted**

Please use the Candidate Registration Sheet provided to indicate your chosen answer to each multiple choice question. Each question within this section is worth 2 marks

**1 Which one of the following is a common feature of cost accounting but not financial accounting?**

- A** Control accounts
- B** Cost classification
- C** Marginal costing
- D** Periodic stocktaking

**2 Which chart shows the unit cost behaviour of straight-line depreciation costs?**



- A** Chart A
- B** Chart B
- C** Chart C
- D** Chart D

3 The following summary data is provided for two periods:

	Production costs	Output
Period 1	£48,981	29,720 units
Period 2	£55,893	35,480 units

Using the high-low method, what are the estimated fixed costs per period?

- A £6,912
- B £13,317
- C £24,214
- D £26,326

4 A particular cost is classified as being 'semi-variable'.

If activity increases by 10% what will happen to the cost per unit?

- A Increase
- B Reduce but not in proportion to the change in activity
- C Reduce in proportion to the change in activity
- D Remain constant

5 The following transactions relate to a raw material for a period:

Day	Transaction	Units	Total value (£)
1	Balance b/f	100	500
3	Issue	40	
4	Receipt	50	275
6	Receipt	50	300
7	Issue	70	

The *periodic* weighted average method is used to price material issues.

What is the value of the issue on Day 7?

- A £376.25
- B £382.81
- C £402.50
- D £410.00

6 The following statements relate to raw material pricing:

1. Profit will be lower using FIFO rather than LIFO.
2. Production costs will be higher using weighted average pricing rather than FIFO.

Are the above statements true or false in a situation where raw material prices are rising consistently over time?

	Statement 1	Statement 2
A	False	False
B	False	True
C	True	False
D	True	True

The following information applies to Questions 7 and 8

The re-order level of Material M is 1,600 kg and the order quantity is 1,400 kg. Lead times and usage are as follows:

Lead time:	minimum	1 week
	average	1½ weeks
	maximum	2 weeks
Usage:	minimum	600 kg per week
	average	700 kg per week
	maximum	800 kg per week

**7 What is the maximum stock control level of Material M?**

- A 1,400 kg
- B 1,950 kg
- C 2,400 kg
- D 3,000 kg

**8 What is the minimum stock control level of Material M?**

- A Nil
- B 350 kg
- C 550 kg
- D 1,000 kg

**9** The following relate to the management of raw materials:

- (i) holding costs per unit of stock would increase;
- (ii) the economic order quantity would decrease;
- (iii) average stock levels would increase;
- (iv) total ordering costs would decrease.

**Which of the above would result from the introduction of buffer (safety) stocks?**

- A (iii) only
- B (ii) and (iii) only
- C (ii), (iii) and (iv) only
- D (i), (ii), (iii) and (iv)

**10** There are two production cost centres and two service cost centres in a factory. Production overheads have been allocated and apportioned to cost centres and now require re-apportionment from service cost centres to production cost centres. Relevant details are:

	Service Cost Centre A	Service Cost Centre B
Total overhead	£42,000	£57,600
% to Production Cost Centre X	40	55
% to Production Cost Centre Y	60	45

**What is the total re-apportionment to Production Cost Centre Y?**

- A £42,720
- B £48,480
- C £51,120
- D £56,880

- 11 Overheads are absorbed at a pre-determined rate based on direct labour hours. The following additional information is available for a period:

Budget	£164,000 overhead expenditure	10,000 direct labour hours
Actual	£158,000 overhead expenditure	9,800 direct labour hours

**What was the overhead over/under-absorption in the period?**

- A £2,720 over-absorbed  
B £3,224 over-absorbed  
C £3,280 under-absorbed  
D £6,000 under-absorbed
- 12 A company uses absorption costing. In a period, 34,000 units of the company's single product were manufactured and 33,000 units were sold.

Consider the following two statements:

1. Fixed production overheads would be over-absorbed.
2. Profit would be higher than in the previous period.

**Are the statements true in relation to the situation described or is it not possible to determine whether or not they are true?**

	Statement 1	Statement 2
A	Cannot determine	Cannot determine
B	Cannot determine	True
C	True	Cannot determine
D	True	True

- 13 A company sold 82,000 units of its single product in a period in which 84,000 units were manufactured.

Consider the following statements:

1. Stock value at the end of the period would be higher than at the beginning of the period.
2. Stock values both at the beginning and at the end of the period would be higher using absorption rather than marginal costing.

**Are the statements true or false in relation to the situation described?**

	Statement 1	Statement 2
A	False	False
B	False	True
C	True	False
D	True	True

- 14 400 litres of a chemical were manufactured in a period. There is a normal loss of 25% of the material input into the process. An abnormal loss of 5% of material input occurred in the period.

**How many litres of material (to the nearest litre) were input into the process in the period?**

- A 500  
B 520  
C 560  
D 571

**15** The following statements relate to process costing:

1. The higher the net realisable value of normal losses the lower will be the cost per unit of normal output.
2. The higher the abnormal losses the higher will be the cost per unit of normal output.

**Are the statements true or false?**

	<b>Statement 1</b>	<b>Statement 2</b>
<b>A</b>	False	False
<b>B</b>	False	True
<b>C</b>	True	False
<b>D</b>	True	True

The following information applies to Questions 16 and 17

The following planned results are available for a company with a single product:

Sales units	112,000
Sales revenue	£100,800
Variable costs	£60,480
Fixed costs	£36,000

**16** What sales revenue is required to earn a profit of £5,000?

- A** £68,333
- B** £90,000
- C** £102,500
- D** £113,889

**17** What is the margin of safety (sales units)?

- A** 10,800
- B** 12,000
- C** 22,000
- D** 100,000

**18** A machine has an investment cost of £60,000 at time 0. The present values (at time 0) of the expected net cash inflows from the machine over its useful life are:

<b>Discount rate</b>	<b>Present value of cash inflows</b>
10%	£64,600
15%	£58,200
20%	£52,100

**What is the internal rate of return (IRR) of the machine investment?**

- A** Below 10%
- B** Between 10% and 15%
- C** Between 15% and 20%
- D** Over 20%

**19** An investment project has a positive net present value (NPV) of £7,222 when its cash flows are discounted at the cost of capital of 10% per annum. Net cash inflows from the project are expected to be £18,000 per annum for five years. The cumulative discount (annuity) factor for five years at 10% is 3.791.

**What is the investment at the start of the project?**

- A** £61,016
- B** £68,238
- C** £75,460
- D** £82,778

**20** The following statements relate to an investment project that has been discounted at rates of 10% and 20%:

1. The discounted payback period at 10% will be longer than the discounted payback period at 20%.
2. The discounted payback period at 20% will be longer than the discounted payback period at 10%.
3. The non-discounted payback period will be longer than the discounted payback period.
4. The non-discounted payback period will be shorter than the discounted payback period.

**Which of the statements are true?**

- A** 1 and 3
- B** 1 and 4
- C** 2 and 3
- D** 2 and 4

**(40 marks)**

**Section B – ALL FOUR questions are compulsory and MUST be attempted**

1 (a) Costs relating to labour turnover may be classified as:

- (i) replacement costs
- (ii) preventative costs.

**Required:**

**Give TWO examples of costs within EACH of the above classifications and state a formula used to calculate the rate of labour turnover.** (6 marks)

(b) A company manufactures a single product at the rate of 25 units per direct labour hour. 660 direct labour hours were budgeted to be worked in a period during which 640 hours were actually worked and 16,390 units were manufactured.

**Required:**

**Calculate the following ratios for the period:**

- (i) **efficiency;**
- (ii) **capacity;**
- (iii) **production volume.**

(10 marks)

**(16 marks)**

2 A company manufactures Products A and B jointly in a single operation. The following information relates to the most recent period:

	<b>Kg</b>	<b>Costs (£)</b>
Raw material input	120,000	432,000
Conversion costs		348,000
Output – Product A	72,000	
– Product B	48,000	

Product A is sold for £8.60 per kg. Product B can be sold for £7.80 per kg or alternatively can be further processed to produce the same weight of Product BB. Further processing costs are £1.40 per kg. Product BB can be sold for £9.00 per kg.

**Required:**

(a) **Calculate the profit/loss in the period for each product and in total, assuming:**

- (i) **all output was sold as Products A and B; and**
- (ii) **joint costs were apportioned on the basis of weight of output.**

(8 marks)

(b) **Determine whether further processing of Product B is worthwhile.**

(6 marks)

**(14 marks)**



**3 (a) Describe the main ways in which the costing of services differs from the costing of manufactured products.** (6 marks)

**(b)** A transport business operates a fleet of 10 vehicles. Operating data are as follows:

Purchase of vehicles (depreciated on a straight-line basis over 4 years)	£460,000 (for 10 vehicles)
Vehicle disposal value (after 4 years)	£4,000 (per vehicle)
Road fund licence and insurance	£2,290 (per vehicle per year)
Tyres (8 per vehicle renewed every 40,000 kilometres)	£210 (per tyre)
Servicing (every 16,000 kilometres)	£650 (per vehicle service)
Fuel (consumption of 1 litre per 3.2 kilometres)	£0.80 (per litre)
Vehicle usage	80,000 kilometres (per vehicle per year)
Drivers (1 driver per vehicle)	£18,000 (per driver per year)

**Required:**

**Calculate the total vehicle operating costs per kilometre (to four decimal places of £).** (10 marks)

**(16 marks)**

**4** A company manufactures three products. Sales demand for the products in the next period is estimated to be:

Product A	6,200 units
Product B	8,000 units
Product C	11,500 units

Selling prices and unit costs are:

	Product A £ per unit	Product B £ per unit	Product C £ per unit
Selling price	9.70	11.10	13.80
Costs:			
Direct materials	2.80	3.90	4.92
Direct labour (£8.00 per hour)	2.40	2.40	3.20
Variable overhead	0.90	0.90	1.20
Fixed overheads	2.70	2.70	3.60

The company is experiencing a shortage of direct labour and estimates that a maximum of 8,500 hours will be available in the next period.

**Required:**

**(a) Demonstrate that the availability of direct labour will be a limiting factor in the next period.** (4 marks)

**(b) Determine the production schedule for the next period that will maximise profit.** (10 marks)

**(14 marks)**

**End of Question Paper**