

Accounting for Costs

ACCA CERTIFIED ACCOUNTING TECHNICIAN EXAMINATION

INTERMEDIATE LEVEL

THURSDAY 7 DECEMBER 2006

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

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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 of the following describes the control process?

- A The action of monitoring something to keep it on course
- B The choice between alternatives
- C The development of strategies to achieve objectives
- D The establishment of a plan for a future period

2 Consider the following statements in relation to management information:

- (i) It should always be provided regardless of its cost
- (ii) It is data that has been processed in such a way as to be meaningful to the person who receives it
- (iii) It should not be provided until it is as detailed and accurate as possible

Which of the above statements is/are true of good management information?

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

3 Which of the following is a feature of cost accounting but not of financial accounting?

- A Control accounts
- B Cost classification
- C Cost units
- D Periodic stocktaking

4 Which of the following factors may affect the choice of computer output medium?

- (i) Whether a hard copy of the output is required
- (ii) Whether the output requires further computer processing
- (iii) Whether a large volume of output is to be used for reference purposes

- A (i) and (ii) only
- B (i) and (iii) only
- C (ii) and (iii) only
- D All three factors

5 Production units and total costs relating to the last three periods have been:

	Period 1	Period 2	Period 3
Production (units)	129,440	117,620	126,310
Total costs (£)	198,968	187,739	195,376

Using the high-low method, what is the estimated variable cost per unit of production?

- A £0.87
- B £0.95
- C £1.05
- D £1.15

6 What is the first-in first-out (FIFO) method used for?

- A Calculating normal/abnormal losses
- B Estimating equivalent units
- C Valuing raw material issues from stock
- D Valuing raw material receipts into stock

7 Wastage of a raw material during a manufacturing process is 20% of input quantity.

What input quantity of raw material is required per kg of output?

- A 0.8 kg
- B 1.2 kg
- C 1.25 kg
- D 1.33 kg

8 In the context of stock control what is the maximum stock control level?

- A The level below which stock should not fall if usage is at the maximum expected
- B The level below which stock should not fall if average usage occurs
- C The level that stock should not exceed if usage is at the minimum expected
- D The level that stock should not exceed if average usage occurs

9 Production labour costs may include:

- (i) cost centre supervisors' wages
- (ii) overtime hours of direct operatives at basic rate
- (iii) overtime costs of indirect operatives
- (iv) piecework payments to direct operatives

Which items will usually be included in production overheads?

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

10 The following statements relate to the depreciation of a fixed asset:

- (i) A higher expected disposal value at the end of the asset's useful life would result in a lower depreciation charge
- (ii) The use of the machine hour method may result in a different depreciation charge each period
- (iii) If the actual disposal value of the asset exceeds its net book value a further depreciation cost will arise

Which of the statements is/are true?

- A (i) only
- B (i) and (ii) only
- C (ii) and (iii) only
- D All three statements

- 11 The overheads of two service departments (SCC1 and SCC2) in a factory require re-apportionment to the two production departments (PCC1 and PCC2):

	Total overhead	% to PCC1	% to PCC2
SCC1	£32,170	35	65
SCC2	£24,850	65	35

What is the total re-apportionment to production department PCC2?

- A £19,957
 B £27,412
 C £29,608
 D £37,063
- 12 A company with a single product manufactured 10,200 units in a period in which 10,300 units were sold. Consider the following statements:
- (i) The profit for the period would be higher using absorption costing (compared with marginal costing)
 (ii) Stock values would be higher using absorption costing (compared with marginal costing)

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

	Statement (i)	Statement (ii)
A	False	False
B	False	True
C	True	False
D	True	True

- 13 A manufacturing business worked on four jobs during a period:

	Job 1	Job 2	Job 3	Job 4
	£	£	£	£
Work-in-progress at the beginning of the period	5,260	3,170	6,940	–
Direct materials in the period	1,120	4,650	6,010	3,360
Direct labour in the period	580	3,970	5,170	2,980

Production overheads totalled £11,430 in the period and are absorbed into the cost of jobs as a percentage of direct labour cost. Jobs 1, 3 and 4 were all completed in the period.

What is the value of work-in-progress at the end of the period?

- A £8,620
 B £11,790
 C £12,193
 D £15,363
- 14 **For which costing method is the concept of equivalent units relevant?**
- A Batch costing
 B Job costing
 C Process costing
 D Service costing

- 15** Costs incurred in a process totalled £61,600 for a period. 22,000 units of finished product were manufactured, of which 440 units were rejected. This is the normal level of rejects for the process. Rejected units are sold for £1.80 per unit.

What was the cost per unit of good output (to the nearest penny)?

- A** £2.76
- B** £2.80
- C** £2.82
- D** £2.86

- 16** A process requires the input of a single raw material at the start of the process. There are no process losses. 10,000 units of the material were input to the process in a period. At the end of the period, processing was only 75% complete on 800 units of the material. There was no work-in-progress at the beginning of the period.

What were the equivalent units of production?

	Raw material	Conversion costs
A	9,400	9,400
B	9,800	9,800
C	10,000	9,400
D	10,000	9,800

- 17** Products X and Y are joint products. The joint process costs for a period, during which 10,000 units of X and 15,000 units of Y were manufactured, were £87,500.

The sales value method is used to apportion the joint process costs. Selling prices are £6.00 per unit for Product X and £8.00 per unit for Product Y.

What is Product X's share of the joint process costs?

- A** £29,167
- B** £35,000
- C** £37,500
- D** £43,750

- 18** A hotel has 60 available rooms. Room occupancy was 80% during a 90 day period during which total costs incurred were £104,976.

What was the cost per occupied room per night in the period?

- A** £12.44
- B** £15.55
- C** £19.44
- D** £24.30

19 A company has fixed costs per period as follows:

Manufacturing	£56,000
Non-manufacturing	£38,000

Variable costs of the company's single product are £4.20 per unit and the selling price is £7.00 per unit.

What sales revenue (to the nearest £000) is required in a period to make a profit of £6,000?

- A** £163,000
- B** £167,000
- C** £241,000
- D** £250,000

20 A capital investment project requires a cash outflow of £81,000 at the start of the project. Annual cash inflows are forecast to be constant for four years (Years 1 to 4).

The net present value (NPV) of the project at a discount rate of 12% per annum is £8,683 (positive). The internal rate of return of the project is 17%. Annuity factors (Years 1 to 4) at 12% and 17% are 3.037 and 2.743 respectively.

What is the forecast annual cash inflow?

- A** £23,810
- B** £26,670
- C** £29,530
- D** £32,695

(40 marks)

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

1 (a) Define, and give an example of, each of the following:

(i) **cost unit;** (3 marks)

(ii) **cost centre.** (3 marks)

(b) Distinguish between cost centres, profit centres and investment centres. (4 marks)

(10 marks)

2 A company manufactures a single product. Currently, the company employs a team of six direct operatives who produce a total of 2,500 units of the product in a 40-hour week. The hourly rate of pay for all operatives is £8.00.

In an effort to improve productivity, and thus to increase output in the normal 40-hour week, an incentive scheme has been suggested. The scheme, which the six operatives have agreed to trial over a 4-week period, provides for differential piecework payments in addition to a reduced basic rate per hour. Details of the scheme are:

Basic hourly rate £4.00 per hour

Differential piecework rates:

First 2,500 units of output in a week £0.375 per unit

Output 2,501 to 3,000 units in a week £0.45 per unit on additional units over 2,500

Output over 3,000 units in a week £0.60 per unit on additional units over 3,000

In the first week of the trial, total output was 3,080 units in the 40 hours worked.

Required:

(a) For the existing time rate payment system, calculate:

(i) **the labour cost per unit, based on the current weekly output of 2,500 units;** (2 marks)

(ii) **the % change in the labour cost per unit if weekly output in the 40 hours worked could be increased to 2,750 units.** (2 marks)

(b) For the incentive scheme, calculate:

(i) **the labour cost per unit, based on the results of the first week of the trial;** (6 marks)

(ii) **the level of output in a 40 hour week at which total labour cost would be the same as under the existing time rate payment system.** (5 marks)

(15 marks)

- 3 A company has three production departments (X, Y and Z) in its factory. After completion of all overhead allocation and apportionment, the production department budgets for Year 6 included the following:

	Department		
	X	Y	Z
Overhead costs	£51,240	£87,120	£66,816
Direct labour hours	–	–	11,520
Machine hours	4,200	5,280	–

A predetermined overhead absorption rate is established for each production department each year.

Actual data for Month 1 of Year 6 included:

	Department		
	X	Y	Z
Overhead costs	£4,410	£7,190	£5,610
Direct labour hours	–	–	985
Machine hours	340	426	–

Required:

- Calculate, from the data provided, an appropriate predetermined overhead absorption rate for each production department for Year 6. (4 marks)
- Calculate the amount of the over/under absorption of overhead in Month 1 in each production department and in total for the factory. (9 marks)
- Suggest two general causes of overhead under absorption. (3 marks)

(16 marks)

4 A company currently has spare labour hours in Department X and spare machine capacity in Department Z, and is considering each of the following independent opportunities:

1. Whether to quote for Contract W which would be completed in the near future.
2. Whether to take on sub-contract work for a period of three years.

1. Contract W:

The contract would be carried out without the need for any additional direct operatives in Department X where two existing operatives, each paid at a rate of £7.50 per hour for a guaranteed 37-hour week, would work on the contract for a total of 220 hours. In another department, Department Y, additional labour would have to be taken on at a cost of £2,400.

Total material costs for the contract are estimated at £5,740, based on replacement prices. Included in materials is Component M, a quantity of which is in stock. Component M is no longer used in the company's business. Details of Component M are:

Stockholding	80 units
Required for Contract W	120 units
Purchase price of existing stock	£6.10 per unit
Disposal proceeds of existing stock if sold	£4.60 per unit
Replacement price	£6.50 per unit

Overheads would be absorbed on the contract on the following basis:

- Production overheads – 120% of direct labour cost (only 20% of the overheads absorbed would be an incremental cost)
- Non-production overheads – 40% of total production cost (none of the overheads absorbed would be an incremental cost)

2. Sub-contract work:

The sub-contract work would be carried out in Department Z, utilising existing machinery. The machinery is now surplus to requirements and would otherwise be sold. The net book value of the machinery is £140,000 but the current disposal value is only £120,000. If used for three years on the sub-contract work the disposal value would be expected to reduce to £10,000. The remaining net book value of the machinery would be depreciated on a straight-line basis over the three years.

Net cash inflows from the sub-contract work, occurring at the end of each year, are forecast to be:

Year 1	£40,000
Year 2	£55,000
Year 3	£60,000

Required:

- (a) Calculate the minimum price that could be quoted for Contract W in order to recover incremental costs only. (Show workings clearly.) (10 marks)
- (b) Calculate the net present value (NPV) for the sub-contract work at a cost of capital of 10% per annum.

Discount factors at 10%:

Year 1	0.909	
Year 2	0.826	
Year 3	0.751	(9 marks)

(19 marks)

End of Question Paper