NVQ/SVQ Level 3 in Accounting Recording and Evaluating Costs and Revenues (ECR) (2003 standards)

AAT
ASSOCIATION OF ACCOUNTING TECHNICIANS

Monday 13 June 2005 (afternoon)

EXAMINATION

Time allowed — **3 hours plus 15 minutes' reading time**

Please complete the following information in BLOCK CAPITALS. You must give your registration number below. If you do not, your paper may not be marked.

AAT Registration Number | | | | | | | | | | | Desk number .....

Approved Assessment Centre Code | | | | | | | | | | | Date .....

Approved Assessment Centre Name.....

Important:

This examination paper is in two sections. You must show competence in both sections, so you should attempt and aim to complete every task in each section.

We recommend that you use the 15 minutes' reading time to study the examination paper fully and carefully so that you understand what to do for each task. However, you may begin to write your answers within the reading time, if you wish.

You may not use programmable calculators or dictionaries in the examination.

Do NOT open this paper until instructed to do so by the Supervisor.

For Assessor's use only

	TASK 1.1	TASK 1.2	TASK 1.3	TASK 1.4	TASK 1.5	TASK 1.6	TOTAL
SECTION 1							

	TASK 2.1	TASK 2.2	TASK 2.3	TASK 2.4	TASK 2.5	TASK 2.6	TOTAL
SECTION 2							

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This examination paper is in TWO sections.

You are required to demonstrate competence in BOTH sections.

You should, therefore, attempt and aim to complete EVERY task in BOTH sections. All tasks should be completed in numerical order.

Blank space for workings is available on pages 21–23, but essential workings should be included within your answers, where appropriate.

You should spend about 90 minutes on each section.

Both sections are based on Delcom Ltd.

DATA

You are employed as an accounting technician with Delcom Ltd, a company that manufactures and sells a small range of precision engineered parts. Its customer base is the European car market.

You report to the Management Accountant, who has asked you to carry out the following tasks.

SECTION 1

You should spend about 90 minutes on this section.

Task 1.1

Complete the stock record card shown below for steel component M, for the month of May 2005.

The company uses the First In, First Out (FIFO) method of stock valuation.

STOCK RECORD CARD FOR STEEL COMPONENT M								
	Receipts			Issues			Balance	
Date 2005	Quantity kg	Cost per kg (£)	Total cost (£)	Quantity kg	Cost per kg (£)	Total cost (£)	Quantity kg	£
Balance as at 1 May							25,000	50,000
9 May	30,000	2.30	69,000					
12 May				40,000				
18 May	20,000	2.50	50,000					
27 May				10,000				

ADDITIONAL INFORMATION

The issue of component M on 12 May was for the production of product A, whilst that on the 27 May was for the production of product B

The following cost accounting codes are used:

Code	Description
306	Stocks of component M
401	Work in progress – Product A
402	Work in progress – Product B
500	Creditors Control

Task 1.2

Complete the journal below to record separately the FOUR cost accounting entries in respect of the two receipts and two issues during the month of May 2005.

JOURNAL

Date 2005	Code	Dr. (£)	Cr. (£)
9 May			
9 May			
12 May			
12 May			
18 May			
18 May			
27 May			
27 May			

ADDITIONAL INFORMATION

The following information relates to direct labour costs incurred in producing product C during May 2005:

Normal time hours worked	8,000 hours
Overtime at time and a half worked	1,500 hours
Overtime at double time worked	1,000 hours
Total hours worked	10,500 hours
Normal time hourly rate	£7 per hour

Task 1.3

Overtime premiums paid are included as part of direct labour costs.

Calculate the total cost of direct labour for product C for the month of May 2005.

ADDITIONAL INFORMATION

Delcom has the following four production departments:

- Machining 1
- Machining 2
- Assembly
- Packaging

The budgeted fixed overheads relating to the four production departments for Quarter 3 2005 are:

	£	£
Depreciation		80,000
Rent and rates		120,000
Indirect labour costs:		
Machining 1	40,500	
Machining 2	18,300	
Assembly	12,400	
Packaging	26,700	
Total		97,900
Direct assembly costs		15,600
Total fixed overheads		313,500

Fixed overheads are allocated or apportioned to the production departments on the most appropriate basis.

The following information is also available:

Department	Net book value of fixed assets (£000)	Square metres occupied	Number of employees
Machining 1	1280	625	8
Machining 2	320	250	4
Assembly	960	500	3
Packaging	640	1125	7
Total	3200	2500	22

Task 1.4

Use the table below to allocate or apportion the fixed overheads between the four production departments, using the most appropriate basis.

Fixed overhead	Basis of allocation or apportionment	Total cost (£)	Machining 1 (£)	Machining 2 (£)	Assembly (£)	Packaging (£)
Depreciation		80,000				
Rent & rates		120,000				
Indirect labour costs		97,900				
Direct assembly costs		15,600				
Totals		313,500				

ADDITIONAL INFORMATION

You have consulted the manager of a separate production division, who tells you that this division is highly automated, and operates with expensive machinery which is run wherever possible on a 24 hour a day, 7 days a week basis.

The following information relates to this division for July 2005:

Total departmental overheads	£400,000
Total budgeted direct labour hours	3,000
Total budgeted machine hours	10,000
Total actual direct labour hours	2,500
Total actual machine hours	9,000

Task 1.5

Calculate the budgeted fixed overhead absorption rate for the division for July 2005, using the most appropriate basis of absorption.

ADDITIONAL INFORMATION

The following information relates to the manufacture of product D during the month of April 2005:

Direct materials per unit	£10.60
Direct labour per unit	£16.40
Total variable overheads	£60,000
Total fixed overheads	£80,000
Number of units produced	10,000

Task 1.6

Calculate the cost per unit of product D under:

(a) (i) Variable (marginal) costing

(ii) Full absorption costing

(b) Explain how it is possible to UNDER recover fixed overheads

Explanation of fixed overhead under recovery:

SECTION 2

Candidates should spend about 90 minutes on this section.

Task 2.1

Delcom Ltd has produced three forecasts of activity levels for the next year for product A. The original budget was to produce only 1,000,000 units, but production levels of 1,500,000 units and 2,000,000 units are also feasible.

(a) Complete the table below, in order to estimate the production cost per unit of A at the different activity levels.

Units made	**1,000,000**	**1,500,000**	**2,000,000**
Costs:	**£**	**£**	**£**
Variable costs:			
• **direct materials**	5,000,000		
• **direct labour**	4,600,000		
• **overheads**	3,200,000		
Fixed costs:			
• **indirect labour**	2,500,000		
• **overheads**	6,300,000		
Total cost	21,600,000		
Cost per unit	21.60		

(b) Briefly explain how and why the costs per unit of product A change as the level of activity increases.

(c) The cost schedule above assumes that all production costs are either variable or fixed.

Briefly explain whether this is realistic. Give ONE example of another way that costs can behave, and provide an example of a type of cost that may behave in this way.

Task 2.2

Products B and C have the following budgeted annual sales and cost information:

Product	**B**	**C**
Units made and sold	500,000	750,000
Machine hours required	1,000,000	3,750,000
Sales revenue (£)	5,000,000	9,000,000
Direct materials (£)	1,000,000	2,250,000
Direct labour (£)	1,250,000	2,625,000
Variable overheads (£)	1,500,000	1,500,000

Complete the table below to show the budgeted contribution per unit of B and C sold, and the company's budgeted profit or loss for the year from these two products. Total fixed costs attributable to B and C are budgeted to be £3,450,000.

	B (£)	C (£)	Total (£)
Units selling price			
Less unit variable costs			
direct materials			
direct labour			
variable overheads			
Contribution per unit			
Sales volume (units)			
Total contribution			
Less: fixed costs			
Budgeted profit or loss			

Task 2.3

A special exercise has now been carried out to split the £3,450,000 of attributable fixed costs between products B and C. £1,000,000 was found to relate to B and £2,450,000 to C.

The latest sales forecast is that 480,000 units of product B and 910,000 units of product C will be sold during the year.

(a) On the basis of this new information you are required to complete the table below to:

(i) Calculate the budgeted break-even sales, in units, for each of the two products;

(ii) Calculate the margin of safety (in units) for each of the two products, by comparing the level of sales currently forecast with the break-even level;

(iii) Calculate the margin of safety as a percentage (to 2 decimal places).

Product	**B**	**C**
Fixed costs (£)		
Unit contribution (£)		
Break-even sales (units)		
Forecast sales (units)		
Margin of safety (units)		
Margin of safety (%)		

(b) Explain the meaning of the term "percentage margin of safety", using your calculations of this figure for products B and C to illustrate your answer.

Task 2.4

Due to unforeseen circumstances the number of available machine hours is now found to be limited to 3,500,000 during the year.

Using the information, and your calculations, from Task 2.2, complete the table below to recommend how many units of products B and C should be made in order to maximise the profits or minimise the loss, taking account of the machine hours available.

Product	**B**	**C**	**Total**
Contribution/unit (£)			
Machine hours/unit			
Contribution/machine hr. (£)			
Product ranking			
Machine hours available			
Machine hours allocated to: **Product .....** **Product .....**			
Total contribution earned (£)			
Less: fixed costs (£)			3,450,000
Profit/loss made (£)			

Task 2.5

Delcom is considering introducing a new product, E, for which the following capital expenditure, sales and cost estimates have been produced for its planned three year product life:

	Year 0 £000	Year 1 £000	Year 2 £000	Year 3 £000
Capital expenditure	1,500			
Other cash flows:				
Sales income		700	800	1,000
Operating costs		200	250	300

The company's cost of capital is 12%.

Present value (PV) factors for a 12% discount rate are:

	Year 0	Year 1	Year 2	Year 3
PV factor	1.0000	0.8929	0.7972	0.7118

You are required to calculate both the net present value and the payback period for the proposed new product E.

(a) The net present value

	Year 0 £000	Year 1 £000	Year 2 £000	Year 3 £000
Capital expenditure				
Sales income				
Operating costs				
Net cash flows				
PV factors				
Discounted cash flows				
Net present value				

Task 2.5, continued

(b) The payback period

Task 2.6

Based on the information given in Task 2.5 and your calculations for this task, write a report to the Management Accountant in which you:

(a) Recommend, on the basis of both the net present value and the payback period, whether the proposed new product E should be introduced.

(b) Identify ONE other method of investment appraisal which might also have been used to assess this proposal.

(c) Identify TWO commercial factors which are also relevant to this decision.

Use the report stationery on page 19, continuing on page 20 if necessary.

REPORT

To: **The Management Accountant**

From: **Subject:**

Date:

This page is provided for the continuation of your report. It will not be needed by everyone.

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NVQ/SVQ qualification codes

Intermediate (2003 standards) – 100/2941/2/G793 23
Unit number (ECR) – A/101/8104

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