



# General Certificate of Education

## Accounting 6121

### *ACC7 Further Aspects of Accounting for Management and Decision-making*

## Mark Scheme

### *2005 examination - June series*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

**June 2005**

**ACC7**

## **MARK SCHEME**

### **INSTRUCTIONS TO EXAMINERS**

You should remember that your marking standards should reflect the levels of performance of Advanced Level candidates, mainly 18 years old, writing under examination conditions.

#### **Positive Marking**

You should be positive in your marking, giving credit for what is there rather than being too conscious of what is not. Do not deduct marks for irrelevant or incorrect answers as candidates penalise themselves in terms of the time they have spent.

#### **Mark Range**

You should use the whole mark range available in the mark scheme. Where the candidate's response to a question is such that the mark scheme permits full marks to be awarded, full marks **must** be given. A perfect answer is not required. Conversely, if the candidate's answer does not deserve credit, then no marks should be given.

#### **Alternative Answers / Layout**

The answers given in the mark scheme are not exhaustive and other answers may be valid. If this occurs, examiners should refer to their Team Leader for guidance. Similarly, candidates may set out their accounts in either a vertical or horizontal format. Both methods are acceptable.

#### **Own Figure Rule**

In cases where candidates are required to make calculations, arithmetic errors can be made so that the final or intermediate stages are incorrect. To avoid a candidate being penalised repeatedly for an initial error, candidates can be awarded marks where they have used the correct method with their own (incorrect) figures. Examiners are asked to annotate a script with **OF** where marks have been allocated on this basis. **OF** always makes the assumption that there are no extraneous items. Similarly, **OF** marks can be awarded where candidates make correct conclusions or inferences from their incorrect calculations.

#### **Quality of Written Communication**

Once the whole script has been marked the work of the candidate should be assessed for the Quality of Written Communication, using the criteria at the end of the mark scheme. The mark should be shown separately on the candidate's script.

#### **Synoptic Assessment**

Synoptic assessment is located in the last question. Candidates will be required to integrate their knowledge, understanding and skills learned in different parts of the A Level course.

1

**Total for this question: 12 marks**

Nathan's Nicknaks Ltd sells a single product at £6 per unit. The company's expected sales for the year ended 30 April 2005 were 12 000 units.

At the year end, the company had actually sold 14 000 units for £70 000.

**REQUIRED**

- (a) Calculate the sales price variance. State the formula used.

$$\begin{aligned} \text{Sales price variance AQ (SP - AP) (1)} \\ &= 14\,000 \left( 6 - \frac{70\,000}{14\,000} \right) \quad (1) \text{ for calculation method} \\ &= \text{£}14\,000 \quad (1) \text{ ADV (1)} \end{aligned}$$

**4 marks**

- (b) Calculate the sales volume variance. State the formula used.

$$\begin{aligned} \text{Sales volume variance SP (SQ - AQ) (1)} \\ &= 6 (14\,000 - 12\,000) \quad (1) \text{ for calculation method} \\ &= \text{£}12\,000 \quad (1) \text{ FAV (1)} \end{aligned}$$

**4 marks**

- (c) Explain why each of these variances may have occurred.

**Sales price variance**  
 - lower price (1) OF  
 - due to competition (1) OF  
 - increase market share (1) OF (marketing strategy)

**max 2 marks**

**Sales volume variance**  
 - sold more (1) OF  
 - lower price may make product more attractive to customer (1) OF  
 - lower price than competitor (1) OF

**max 2 marks**

2

**Total for this question: 20 marks**

Roberta uses one machine to manufacture her products. This machine was purchased six years ago for £160 000. It has an expected useful economic life of ten years, and currently produces 6000 units per annum.

Although this machine is still in good working order, Roberta is considering replacing it with a more up-to-date machine at a cost of £350 000. This new machine is expected to increase the annual production by 20% and will last ten years. Roberta will have to borrow to finance the purchase of this machine.

Each unit is sold for £80, and will cost £60 to manufacture.

The discount factors at 14% are:

Year 1	0.877
Year 2	0.769
Year 3	0.675
Year 4	0.592

**REQUIRED**

- (a) Calculate the net present value of the new machine.

Net present value of new machine (1)			
Year	Net cash flows	Discount factor	P value
0	(350 000)	1	(350 000) (2)
1	144 000	0.877	126 288 (1) OF
2	144 000	0.769	110 736 (1) OF
3	144 000	0.675	97 200 (1) OF
4	144 000	0.592	85 248 (1) OF
		N.P.V (1)	<u>69 472</u> (1) OF

$$\begin{aligned}
 W_1 \\
 (6\,000 \times 1.2 (1)) &= 7200 \quad \times 80 (1) - (7200 \times 60 (1)) \\
 &= 576\,000 - 432\,000 \\
 &= 144\,000 (1) \text{ OF}
 \end{aligned}$$

**13 marks**

- (b) Advise Roberta whether she should purchase the new machine. Justify your recommendation.

**Purchase new machine (1) OF.**

**1 mark for recommendation**

**However, positive N.P.V (1) over 4 years but takes 2 years and 157 days to pay back (1) when other machine still has 4 years left (1).**

**Increase in annual production may not materialise (1) and if output remains at 6000, net cash flow reduces to £120 000 p.a. (1), which increases payback (1) to 2 years and 213 days (1) and reduces N.P.V (1) to a negative N.P.V of £440 (1). The borrowing may affect financing of other areas of the business (1) and affect profitability (1). Interest will have to be paid (1) and gearing will be adversely affected (1), which may put off future investors (1).**

**Information is only given for the first 4 years of the machine life, future inflows are uncertain (1). Can she borrow the finance (1)? Can the proceeds of the old machine be used to finance the new machine (1)?**

**max 6 marks**

3

**Total for this question: 18 marks**

CJ Lewison Ltd manufactures two products, Caz and Jaz.

The following information is available.

	Caz	Jaz
Direct materials	3 kg @ £6 per kg	2 kg @ £6 per kg
Direct labour	2 hrs @ £8 per hour	3 hrs @ £8 per hour

The factory operates at full capacity, using 42 000 labour hours.

Demand during the year is expected to be:

Caz	12 000 units @ £42 per unit
Jaz	8 000 units @ £45 per unit.

**REQUIRED**

- (a) Calculate the contribution per unit per labour hour.

$$\begin{aligned}
 &\text{Caz (SP - VC)} \\
 &= 42 - (3 \times 6 + 2 \times 8) \\
 &= \text{£8 p u} \\
 &= \frac{\text{£8 (1)}}{2 (1)} = \text{£4 per hour (1) OF}
 \end{aligned}$$

$$\begin{aligned}
 &\text{Jaz (SP - VC)} \\
 &= 45 - (2 \times 6 + 3 \times 8) \\
 &= \text{£9 p u} \\
 &= \frac{\text{£9 (1)}}{3 (1)} = \text{£3 per hour (1) OF}
 \end{aligned}$$

**6 marks**

- (b) Calculate the optimum production plan that CJ Lewison Ltd should implement to maximise annual profit.

**Optimum production plan**

	<u>Hours</u>		<u>Units</u>		
Caz	24 000	(1) OF (2 x 12 000)	12 000	(2) OF	
Jaz	<u>18 000</u>	(1) OF	6 000	(2) OF	<u>18 000</u>
	<u>42 000</u>				3

**6 marks**

- (3) In order to meet total demand for its products, the company is considering buying-in from other suppliers. The costs of buying-in the units are:

Caz	£35 per unit + 10% delivery charge
Jaz	£38 per unit + 15% delivery charge.

- (c) Explain whether CJ Lewison Ltd should buy-in the shortfall in expected demand.

**Cost per unit of buy-in of Jaz**

**£38 + £5.70 = £43.70 (1) OF**

**∴ profit = £45 - £43.70**

**= £1.30 per unit (1) OF**

**The extra profit of buying in = 2 000 x £1.30 = £2 600 (1) OF**

**Positive contribution to profit (1).**

**This may be worthwhile if CJ Lewison Ltd can rely on quality (1) of product and delivery dates (1)**

**To maintain market share (1)/not lose customers, buy in (1).**

**Plus any other valid comment.**

**max 6 marks**

4

**Total for this question: 10 marks**

Colliers plc manufactures cars. The production manager believes that if an alternative component is used, a saving of £3 could be made. The company produces 40 000 cars each year. Unfortunately, the use of the cheaper component will mean an increase in fuel consumption of 15% and result in more harmful exhaust fumes.

**REQUIRED**

Write a report to Colliers plc, explaining whether they should use the cheaper component. Consider the effect on the environment as well as financial factors.

**To: Colliers plc**  
**From: Student**  
**Date: Date of Exam**  
**Subject: The effects of using the cheaper parts**

} (2)

**2 marks**

**The total cost saving is 40 000 x £3 = £120 000 (1).**

**Is this cost saving enough (1) to offset loss in custom (1) due to higher fuel consumption?**

**Effect on environment of more harmful emissions (1) may result in bad publicity (1) from pressure groups (1) which may force customers to purchase from competitors (1) and therefore adversely affect profitability (1).**

**Decision (1).**

**+ any other valid comment.**

**max 8 marks**

**5****Total for this question: 40 marks**

Sam Grieves has been running his own barber's shop for many years.

The price of a haircut is £8. Sam employs one assistant at £8 per hour. Sam and his assistant each complete three haircuts per hour, five hours a day and six days a week.

The fixed overheads are £880 per week.

Sam needs to withdraw £400 per week for his own living expenses.

**REQUIRED**

- (a) Calculate the maximum number of haircuts that are completed at the barber's shop per week.

$$3 \times 5 \times 6 \times 2 = 180 \text{ cuts} \quad (2) \text{ or } 0$$

**2 marks**

- (b) Calculate the shortfall between the number of haircuts that are completed and the number of haircuts necessary per week to cover Sam's business and living expenses.

$$\begin{array}{r} \text{\textbf{£880}} \quad (1) \quad + \quad \text{\textbf{£400}} \quad (1) \quad + \quad \underbrace{\text{\textbf{(8 x 5 x 6)}}}_{(1)} \quad = \quad \text{\textbf{£1 520}} \end{array}$$

$$\frac{\text{\textbf{1 520}}}{\text{\textbf{8}} \quad (1)} = \text{\textbf{190 cuts}}$$

$$\begin{array}{l} \text{\textbf{Shortfall}} = \text{\textbf{190}} \quad (1) \text{ OF} \quad - \text{\textbf{180}} \quad (1) \text{ OF} \\ \quad \quad \quad \quad \quad \quad \quad \quad = \text{\textbf{10 cuts}} \quad (1) \end{array}$$

**7 marks**

(5)

Sam decides to raise the price of a haircut for an adult to £10, but reduce the price for children under twelve years of age to £6. He knows that 75% of his customers are adults.

During the next four weeks, his assistant wishes to go abroad for two weeks to see his family. This will be paid leave. Sam will not have an assistant for weeks 2 and 3, but he will complete three extra haircuts per day.

(c) Prepare a forecast profit and loss account for the next four weeks.

<b>Sam Grieves</b>			
<b>Forecast Profit and Loss Account for four weeks ending... (1)</b>			
	£	£	
Sales -Sam (W <sub>1</sub> )		3 240	(3)
- Sam extra (W <sub>2</sub> )		324	(2)
- Assistant (W <sub>3</sub> )		1 620	(2)
		5 184	
Assistant wages (8 x 5 x 6 x 4)	960		(1)
Fixed overheads (880 x 4)	3 520		(1)
		(4 480)	
Net profit		704	(1) OF
 <b>W<sub>1</sub> Sam</b>			
3 x 5 x 6 x 4	= 360 (1) cuts in 4 weeks		
75%	= 270 x £10	= £2 700	(1) OF
25%	= 90 x £6	= £540	(1) OF
		3 240	
 <b>W<sub>2</sub> Extra</b>			
1 x 3 x 6	= 18 x 2 = 36		
75%	= 27 x £10	= £270	(1) OF
25%	= 9 x £6	= 54	(1) OF
		324	
 <b>W<sub>3</sub> Assistant</b>			
360 ÷ 2	= 180		
75%	= 135 x 10	= 1350	(1) OF
25%	= 45 x 6	= 270	(1) OF
		1620	

**11 marks**



(5)

Sam currently has a loan of £3000. At the start of week 1, Sam has £500 in the bank and wishes to use any surplus cash to pay off this loan at the end of week 4, without going overdrawn. He realises that for weeks 2 and 3, his income will be reduced, and so he will reduce his own living expenses to £350 for each of these two weeks.

(d) Prepare a cash budget for Sam for each of the next four weeks.

Cash budget for Sam for 4 weeks				
	Wk1	Wk2	Wk3	Wk4
Sales - Sam (W <sub>1</sub> )	810	972	972	810
- Assistant (W <sub>2</sub> )	810	-	-	810
	<u>1620</u>	<u>972</u>	<u>972</u>	<u>1620</u>
Wages	(240)	(240)	(240)	(240)
Fixed o/h	(880)	(880)	(880)	(880)
Sam – exps	(400)	(350)	(350)	(400)
	<u>1360</u>	<u>1310</u>	<u>1310</u>	<u>1460</u>
Opening balance	500	600	102	(396)
Net inflow/outflow	100	(498)	(498)	100
Closing balance	<u>600</u>	<u>102</u>	<u>(396)</u>	<u>(296)</u>

$$W_1 \quad \frac{3240}{4} = 810$$

$$W_2 \quad \frac{1620}{2} = 810$$

$$\begin{array}{rcl}
 W_3 & 6 \times 3 \times 6 & = 108 \\
 & 75\% & = 81 \times 10 = 810 \\
 & 25\% & = 27 \times 6 = 162 \\
 & & \underline{\quad 972}
 \end{array}$$

**13 marks**

(e) Calculate the maximum amount of the loan that can be repaid at the end of the four-week period.

**Own figure from (d) up to £3 000 (2).**

**Cannot pay as overdrawn by week 3 (2).**

**max 2 marks**

(f) Explain the difference between cash and profit.

**Cash = physical amount (tangible) in bank or till (1)**

**Profit = calculated figure (1)**

**= includes non-cash items (1) eg depreciation (1)**

**= does not include capital items (1) eg drawings (1).**

**max 5 marks**

## QUALITY OF WRITTEN COMMUNICATION

After the candidate's script has been marked, the work should be assessed for the Quality of Written Communication, using the following criteria.

### Marks

- 0** Accounts and financial statements are unclear and poorly presented.  
There is little or no attempt to show workings or calculations.  
Descriptions and explanations lack clarity and structure.  
There is very limited use of specialist vocabulary.  
Answers may be legible but only with difficulty.  
Errors in spelling, punctuation and grammar are such that meaning is unclear.
- 1-2** There is some attempt to present accounts and financial statements in an appropriate format.  
Workings are missing or are not clearly linked to the answers.  
Descriptions and explanations are understandable but they lack a logical structure.  
There is some use of specialist vocabulary but this is not always applied appropriately.  
In most cases answers are legible, but errors in spelling, punctuation and grammar are such that meaning may be unclear.
- 3-4** Accounts and financial statements are generally well presented but there are a few errors.  
Workings are shown and there is some attempt to link them to the relevant account(s).  
Descriptions and explanations are usually clearly expressed but there are some weaknesses in the logical structure. There is a good range of specialist vocabulary which is used with facility.  
Answers are legible. Spelling is generally accurate and the standard conventions of punctuation and grammar are usually followed.
- 5** Accounts and financial statements are well organised and clearly presented.  
Workings are clearly shown and easy to follow. Descriptions and explanations are clearly expressed.  
Arguments are logically structured. There is wide use of specialist vocabulary which is used relevantly and precisely.  
Answers are clearly written and legible. Spelling is accurate and the standard conventions of punctuation and grammar are followed so that meaning is clear.