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**General Certificate of Education**

**Accounting ACC7**

**Unit 7 Further Aspects of Accounting for  
Management and Decision Making**

**Mark Scheme**

*2008 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 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.

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## 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 (QWC)

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: 30

One of the assembly machines at Roberts Ltd needs to be replaced.

A replacement machine will cost £200 000, which is payable on purchase.

The replacement machine is expected to last 4 years, but will need a complete maintenance check in year 3 at a cost of £50 000.

The existing machine assembles 4000 units a year. The number of units assembled by the replacement machine is expected to be 25% lower in year 1 than the existing machine due to the time lost during installation and testing. In year 2 it is expected that 4500 units will be assembled and this will increase by 20% each year compared to the previous year.

The existing machine produces units at a cost of £26 each, whereas the replacement machine will produce units at a cost of £24 each. The selling price is currently £42 per unit but with the improved quality provided by the replacement machine this will increase to £45 per unit. From year 3, it is expected that the cost of manufacture will increase by 25% each year and the selling price will increase by 30% each year compared to the previous year.

The cost of capital is 14%.

The following is an extract from the present value table for £1.

	<b>14%</b>
Year 1	0.877
Year 2	0.769
Year 3	0.675
Year 4	0.592

It is assumed that all units produced are sold.

### REQUIRED

1(a) Calculate the expected net cash flows for each year, using the replacement machine.

	Inflow £	Outflow £	Net inflow £
Year 1	135 000 *	(72 000) (1)OF	63 000(1)OF
Year 2	202 500 *	(108 000) (1)OF	94 500(1)OF
Year 3	315 900 *	(212 000) (2)OF**	103 900(1)OF
Year 4	492 804 *	(243 000) (1)OF	249 804(1)OF

\*3 marks for all 4, 2 marks for 3, 1 mark for 2

\*\* Workings:  $5400 \times 30 (1) + 50\,000 (1)$

**12 marks**

1(b) Calculate the payback period for the replacement machine.

$$2 \text{ years and } \frac{42\,500 \times 365}{103\,900}$$

2 years (1) OF and 149.3 days/ 2.41 years/ 2 years and 4.91 months/ 2 years and 21.27 weeks (1)OF

2 marks

1(c) Calculate the net present value for the replacement machine using the expected net cash flows. Assume that revenues are received and costs are paid at the end of each year.

**Net present value calculation**

Year	Net cash flow £	Discount rate	Present value £
0	(200 000)	1	(200 000.00) (1)
1	63 000	0.877	55 251.00 (1)OF
2	94 500	0.769	72 670.50 (1)OF
3	103 900	0.675	70 132.50 (1)OF
4	249 804	0.592	<u>147 883.97</u> (1)OF
		<b>Net present value</b>	<u><b>145 937.97</b></u> (1)OF

6 marks

1(d) Compare the two methods of capital investment appraisal.

**Payback ignores the time value of money (1) but is easy to calculate (1).**

**It ignores the money made after the payback (1) and also the life of the asset (1).**

**Shows how long it takes to pay for the machine (1)**

max 2 marks

**Net present value considers the time value of money (1).**

**It includes all the net cash flows (1) and considers the whole life of the asset (1).**

**More complex to calculate (1).**

max 2 marks

4 marks

1(e) Prepare comparative budgeted trading accounts for year 1 for:

- (i) the existing machine and
- (ii) the replacement machine.

**Comparative trading accounts for Roberts Ltd for year 1**

	Existing machine £	Replacement machine £
Sales	168 000(1)	135 000(1)
Purchases	<u>104 000(1)</u>	<u>72 000(1)</u>
Gross profit	<u>64 000(1)OF</u>	<u>63 000(1)OF</u>

6 marks

2

Total for this question: 16

Spencer Ltd manufactures a single product, the Spenz.

The following information relates to the month of May 2008.

	Budgeted	Actual
Production	2400 units	2200 units
Direct material	5 kilos at £5.50 per kilo per unit	£66 000 (13 200 kilos)
Direct labour	6 hours at £4.50 per hour per unit	£70 400 (17 600 hours)

The budgeted profit for May 2008 was £26 000.

### REQUIRED

2(a) Calculate the material price **and** material usage sub-variances.

material price variance  
**13 200 (5.50 - 5)**  
**= £6600 fav (2)**

material usage variance  
**5.50 (11 000 - 13 200)**  
**= £12 100 adv (2)**

**4 marks**

2(b) Calculate the labour rate **and** labour efficiency sub-variances.

labour rate variance  
**17 600 (4.50 - 4)**  
**= £8800 fav (2)**

labour efficiency variance  
**4.50 (13 200 - 17 600)**  
**= £19 800 adv (2)**

**4 marks**

2(c) Calculate the actual profit for Spencer Ltd for the month ended May 2008.

### Actual profit for Spencer Ltd for the month ended 31 May 2008

	£
Budgeted profit	26 000 (1)
Material price	600 (1)OF for both
Material usage	(12 100)
Labour rate	8 800 (1)OF for both
Labour efficiency	<u>(19 800)</u>
Actual profit	<u>9 500 (1)OF</u>

**4 marks**

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2(d) Explain **two** possible ways in which the variances will affect the current workforce.

- **reduction in labour rate per hour (1) but increase in hours (1)**
- **if the reduction in profit continues the business may make a loss, leading to closure and job losses (1)**
- **may look elsewhere to gain skills (1) to increase rate of pay (1)**
- **material may be of poorer quality which makes workers' jobs harder (1)**
- **may need to receive training to improve efficiency (1)**
- **lower motivation due to wage rate drop (1) so less efficiency in production (1)**
- **no pay rises/bonuses (1).**

**1 mark per point and 1 mark for development based on OF**

**max 4 marks**

3

Total for this question: 54 marks

Jameson Ltd manufactures one product. The following information relates to the two production departments and two service departments for one four-week period.

	Production departments		Service departments	
	Machining	Assembly	Maintenance	Canteen
Overheads	£143 500	£154 700	£165 800	£176 900
Direct machine hours	18 845	14 050	-	-
Direct labour hours	6 065	20 350	-	-

The service departments' overheads are apportioned to the production departments on the following basis:

	Machining	Assembly	Canteen
Maintenance	60%	30%	10%
Canteen	40%	60%	-

**REQUIRED**

3(a) Prepare an overhead apportionment schedule apportioning the service departments' overheads to the appropriate departments for one period.

	Overhead apportionment schedule			
	Machining	Assembly	Maintenance	Canteen
	£	£	£	£
b/f	143 500	154 700	165 800	176 900
maintenance	99 480(1)	49 740(1)	(165 800) (1)	16 580
canteen	77 392(1)	116 088(1)	-	(193 480) (1)
	<u>320 372(1)OF</u>	<u>320 528(1)OF</u>	<u>-</u>	<u>-</u>

**8 marks**

3(b) Calculate the overhead absorption rates for **each** production department. State the bases used and give a reason for your choice.

**Overhead absorption rate****machining**

$$\frac{320\,372(1)OF}{18\,845(1)} = \text{£}17.00 \text{ per machine hour (1)OF as capital intensive (1)}$$

**assembly**

$$\frac{320\,528(1)OF}{20\,350(1)} = \text{£}15.75 \text{ per labour hour (1)OF as labour intensive(1)}$$

**8 marks**



The manager of Jameson Ltd calculates selling price per unit based on full cost plus 25% mark-up.

The cost per unit are:

materials: 3 metres at £4 per metre;

labour: 7 hours at £8 per hour.

Each unit takes 3 hours in the machining department and 4 hours in the assembly department. All overheads are fixed.

### REQUIRED

3(c) Calculate the full cost per unit.

	£	
<b>Materials (3 x 4)</b>	<b>12.00(1)</b>	
<b>Labour (7 x 8)</b>	<b>56.00(1)</b>	
<b>Overheads - machining (17.00 x 3)</b>	<b>51.00(1)OF</b>	
<b>- assembly (15.75 x 4)</b>	<b>63.00(1)OF</b>	
<b>Full cost per unit</b>	<b><u>182.00(1)OF</u></b>	<b><u>5 marks</u></b>

3(d) Calculate the selling price per unit.

$$182 (1)OF \times 1.25(1) = \text{£}227.50 (1)OF \quad \text{3 marks}$$

3(e) Calculate the number of units Jameson Ltd has to produce and sell in each period to break even.

$$\text{Break-even } 640\ 900(1) / (227.50(1)OF - 68.00(1)OF) = 4018.18 \text{ units}(1)OF$$

or rounded to 4019 (1)OF

**4 marks**

3(f) Explain **two** limitations of break-even analysis.

#### Presumes:

- everything produced is sold, ie no changes in stock levels
- that selling price is perfectly variable
- that variable costs are linear with production
- that fixed costs are fixed for all levels of production
- no product mix
- no semi-variables
- based on estimates
- does not consider external factors in future.

(2 x 2 marks)  
**max 4 marks**

A new overseas customer has placed an order for 2500 units at £100 each. Additional delivery costs of £7500 will be paid by Jameson Ltd. The new customer has not traded with any company before but has requested 2 months' credit terms.

### REQUIRED

3(g) Write a report to the directors of Jameson Ltd recommending whether or not the new order should be accepted. Consider **both** financial **and** non-financial factors. Justify your decision.

**To: The directors of Jameson Ltd**

**From: A Student**

**Date: 13 June 2008**

**Subject: Recommendation regarding new order**

**2 marks for all four headings  
1 mark for 2/3 headings**

**The new order has a positive contribution (1) of:**

**$(100 - 68) (1) \text{OF} \times 2500 = \text{£}80\,000(1) \text{OF} - \text{£}7500(1)(\text{delivery}) = \text{£}72\,500(1) \text{OF}$**

**However, new customer has no credit history (1) hence uncertainty about payment (1); there is a long credit period (1) for a new customer of two months giving a delay in cash flow (1) which may cause liquidity problems (1); costs of  $2500 \times 68 = \text{£}170\,000(1)$  still need to be paid, as well as delivery costs, and usually within 30 days (1). Reliability (1). Could lead to more orders (1). Could lead to expansion/increase of overseas market (1). Existing customer reaction (1). Exchange rate fluctuations (1). Bad debt probability (1) due to longer credit period (1).**

**Justification (2)**

**max 10 marks  
Overall max 12 marks**

The business operates over 13 periods a year. Each period consists of four weeks with five working days in each week.

The sales for the next four periods are expected to be:

	<b>Period 1</b>	<b>Period 2</b>	<b>Period 3</b>	<b>Period 4</b>
Units	11 500	12 000	14 000	12 500

Assume that sales accrue evenly within each period.

The stock at the start of period 1 was 4600 units. It is the policy to maintain the closing stock of units at a level which is sufficient to cover 8 days of sales for the next period. However, storage constraints restrict stock to a maximum of 5000 units.

### REQUIRED

3(h) Prepare the production budget in units for **each** period for periods 1-3.

	<b>Production budget for periods 1-3</b>		
	<b>Period 1</b>	<b>Period 2</b>	<b>Period 3</b>
Sales	11 500	12 000	14 000
Opening stock	(4 600)(1)	(4 800)	(5 000)
Closing stock	<u>4 800 (1)</u>	<u>5 000(1)</u>	<u>5 000(1)</u>
Production	<u>11 700 (1)OF</u>	<u>12 200 (1)OF</u>	<u>14 000(1)OF</u>

**7 marks**

3(i) Calculate the **total** direct production costs for periods 1-3.

$$37\,900(1)OF \times 68(1)OF = \pounds 2\,577\,200(1)OF$$

**3 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.

To help them to make judgements, examiners should focus on the following issues.

Are there clear presentations of formats and prose answers?

Are there clear and logical workings, where appropriate?

Is the whole script legible, understandable and logically argued (including spelling, punctuation and grammar)?

Is there a grasp of accounting terminology (eg avoiding slang, avoiding text language, avoiding abbreviations in prose answers)?

Are arguments logically argued?