

A-LEVEL ACCOUNTING

Unit 4 Further Aspects of Management Accounting
Mark scheme

2120
June 2014

Version: 1.0
Final

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

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' 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.

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June 2014

ACCN4

MARK SCHEME**INSTRUCTIONS TO EXAMINERS**

You should remember that your marking standards should reflect the levels of performance of students, mainly 17 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 students 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 student'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 student'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, students may set out their accounts in either a vertical or horizontal format. Both methods are acceptable.

Own Figure Rule

In cases where students are required to make calculations, arithmetic errors can be made so that the final or intermediate stages are incorrect. To avoid a student being penalised repeatedly for an initial error, students 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 students make correct conclusions or inferences from their incorrect calculations.

Assessment Objectives (AOs)

The Assessment Objectives are common to AS and A Level. The assessment units will assess the following Assessment Objectives in the context of the content and skills set out in Section 3 (Subject Content) of the specification.

AO1: Knowledge and Understanding	Demonstrate knowledge and understanding of accounting principles, concepts and techniques.
AO2: Application	Select and apply knowledge and understanding of accounting principles, concepts and techniques to familiar and unfamiliar situations.
AO3: Analysis and Evaluation	Order, interpret and analyse accounting information in an appropriate format. Evaluate accounting information, taking into consideration internal and external factors to make reasoned judgements, decisions and recommendations, and assess alternative courses of action using an appropriate form and style of writing.
Quality of Written Communication (QWC)	<p>In GCE specifications which require students to produce written material in English, students must:</p> <ul style="list-style-type: none"> • ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear • select and use a form and style of writing appropriate to purpose and to complex subject matter • organise information clearly and coherently, using specialist vocabulary when appropriate. <p>In this specification, QWC will be assessed in all units. On each paper, two of the marks for prose answers will be allocated to 'quality of written communication', and two of the marks for numerical answers will be allocated to 'quality of presentation'. The sub questions concerned will be identified on the question papers.</p>

Task 1**Total for this task: 21 marks**

01 Calculate the selling price per dog coat. Clearly identify the marginal cost per dog coat and state your answer in pounds and pence.

[4 marks]

	£	
Direct materials (£17.25 x .04)	6.90	(1)
Direct labour - cutting department (£9 x 6/60)	0.90	**
finishing department (£9 8/60)	1.20	** (1) for both
marginal cost	9.00	(1) CF must be labelled
selling price (£9 x 1.25) =	11.25	(1) OF

Marker note:

Individual marks must be shown against each element in the answer.

Students must identify the marginal cost as well as the selling price. A student who shows only a correct selling price of £11.25 without any workings should be awarded 3 marks.

02 Calculate how many dog coats have to be produced and sold during the year to achieve the target profit of £21 750.

[4 marks]

$$\frac{147\,000 \text{ (1)} + 21\,750 \text{ (1)}}{(11.25 - 9.00) \text{ (1) OF}} = 75\,000 \text{ (1) OF}$$

Note

No target profit included = 65 334 **(3)**

$$\frac{147\,000 \text{ (1)}}{(11.25 - 9.00) \text{ (1) OF}} = 65\,334 \text{ (1) OF}$$

No fixed costs included = 9 667 **(3)**

$$\frac{+ 21\,750 \text{ (1)}}{(11.25 - 9.00) \text{ (1) OF}} = 9\,667 \text{ (1) OF}$$

Marker note:

Award 4 marks for 75 000 if no workings; and 65334 (3) and 9667 (3) if no workings.

03 Calculate the percentage mark-up on the absorption cost that would be require to achieve the target profit of £21 750. Assume that both the number of dog coats to be sold and the selling price remain constant. State your answer to 2 decimal places.
[7 marks]

	£	
Direct cost x units = £9 (1) OF x 75 000 =	675 000	(1) OF from 01
Annual fixed costs	147 000	(1)
	822 000	(1) OF

$$\frac{21\,750\ (1)}{822\,000\ * \ (1)\ \text{OF}} \times 100 = 2.65\% \ (1)\ \text{OF}$$

Alternative answer (unit approach):

$$\text{Direct cost } \pounds 9\ (1) + 1.96\ (1)\ \text{fixed costs}^* = 10.96\ (2)$$

$$0.29\ (1)\ **/10.96\ (1) = 2.65\% \ (1)$$

* Fixed costs are 147,000/75,000 = 1.96

** Required profit 21750/75,000 = 0.29

Marker note

* OF mark for absorption cost must be calculated on student's own marginal cost + £147 000

Final answer must be shown as a percentage.

Reward 7 marks for the correct answer 2.65%.

In the case of the alternative approach, award 4 marks for a figure of 10.96.

04 Explain to the directors of Sammy Ltd **two** disadvantages of using absorption costing as opposed to marginal costing.

[6 marks]

- **Estimation:** Absorption costing relies on using future estimated figures for activity and overhead cost **(1)** to calculate an overhead absorption rate **(1)**. These estimated figures may be inaccurate **(1)**
- **Accuracy of process:** The apportionment of overheads may be inaccurate **(1)** due to the arbitrary nature of the bases used **(1)**. Examples **(1)** (e.g. floor area, net book values etc)
- **Decision-making:** Absorption costing cannot be used as an aid to short term decision making **(1)** e.g. breakeven analysis **(1)** as variable costs and fixed costs are not separated **(1)**.

Max 3 marks per point
Overall max 6 marks

Marker note:

Where a student has failed to identify clearly individual disadvantages, use own judgement to distinguish between points made.

Accept maximum one example of a decision-making technique for which absorption costing is not appropriate for 1 mark.

Accept maximum one example of basis for apportionment for 1 mark.

Task 2
Total for this task: 18 marks

05 Prepare a trade payables budget for **each** of the periods 4–7 inclusive.

[18 marks]

[includes 1 mark for quality of presentation]

Sammy Ltd				
Trade payables budget for periods 4 – 7				
	Period 4	Period 5	Period 6	Period 7
Opening balance W1	22 770 (1) CF	22 770 (1) OF	33 120 (1) OF	34 155 (1) OF
Purchases W2	20 700 (1) CF	31 050 (1) CF	31 050 (1) OF*	37 260 (1) CF
1 month credit paid W3	(18 630) (1) CF	(18 630) (1) OF**	(27 945) (1) CF	(27 945) (1) CF
2 month credit paid W3	(2 070) (1) CF	(2 070) (1) OF**	(2 070) (1) CF	(3 105) (1) CF
Closing balance	22 770	33 120	34 155	40 365 (1) OF

Marker Notes

First step is to decide which version of the mark scheme to use: where students have assumed purchases given in the table are per period, or are spread over several periods.

Ignore workings in this question by special exception.

Accept combined figures for payments

* Period 6 purchases should be the same as for Period 5, allow an OF mark here if consistent period 5

** Period 5 payments, accept OF is a repeat of payments made for period 4

Inclusion of cash purchases is an alien – lose closing balance mark.

QWP

QWP **(1) mark** for correct heading and layout of budget (periods in columns etc.)

W1 – Opening balance period 4

20 700 (75% period 3) + 2070 (10% period 2) = 22 770 **(1) CF**

W2 – Purchases

Period 4 – 1600 metres x £17.25 = £27 600 x .75 = £20 700 **(1)**

Period 5 – 2400 metres x £17.25 = £41 400 x .75 = £31 050 **(1)**

Period 6 – 2400 metres x £17.25 = £41 400 x .75 = £31 050 **(1)**

Period 7 – 2880 metres x £17.25 = £49 680 x .75 = £37 260 **(1)**

W3 & W4 – Payments

	Total Purchase	Cash 25%	Credit 75%	Paid P1	Paid P2	Paid P3	Paid P4	Paid P5	Paid P6	Paid P7
P1	27 600	6 900	20 700		18 630	2 070				

P2	27 600	6 900	20 700			18 630	2 070			
P3	27 600	6 900	20 700				18 630	2 070		
P4	27 600	6 900	20 700					18 630	2 070	
P5	41 400	10 350	31 050						27 945	3 105
P6	41 400	10 350	31 050							27 945
P7	49 680	12 420	37 260							
							20 700	20 700	30 015	31 050

Alternative answer (based on the assumption that information about material purchases in table in question was for the total for the periods shown)

Sammy Ltd					
Trade payables budget for periods 4 – 7					
		Period 4	Period 5	Period 6	Period 7
Opening balance	W1	5692 (1) CF	5693 (1) OF	16044 (1) OF	17080 (1) OF
Purchases	W2	5175 (1) CF	15525 (1) CF	15525 (1) OF*	5317 (1) CF
1 month credit paid	W3	(4657) (1) CF	(4657) (1) OF**	(13972) (1) CF	(13972) (1) CF
2 month credit paid	W3	(517) (1) CF	(517) (1) OF**	(517) (1) CF	(1552) (1) CF
Closing balance		5693	16044	17080	6873 (1) OF

QWP

QWP **(1) mark** for correct heading and layout of budget (periods in columns etc.)

W1 – Opening balance period 4

$5175 (75\% \text{ period } 3) + 517(10\% \text{ period } 2) = 5692 \text{ (1)}$

W2 – Purchases

Period 4 – $400 \text{ metres} \times \pounds 17.25 = \pounds 6900 \times .75 = \pounds 5175 \text{ (1)}$

Period 5 – $1200 \text{ metres} \times \pounds 17.25 = \pounds 20700 \times .75 = \pounds 15525 \text{ (1)}$

Period 6 – $1200 \text{ metres} \times \pounds 17.25 = \pounds 20700 \times .75 = \pounds 15525 \text{ (1)}$

Period 7 – $411^* \text{ metres} \times \pounds 17.25 = \pounds 7090 \times .75 = \pounds 5317 \text{ (1)}$

	Total Purchase	Cash 25%	Credit 75%	Paid P1	Paid P2	Paid P3	Paid P4	Paid P5	Paid P6	Paid P7
P1	6900	1725	5175		4657	517				
P2	6900	1725	5175			4657	517			
P3	6900	1725	5175				4657	517		
P4	6900	1725	5175					4657	517	
P5	20 700	5175	15525						13972	1552
P6	20 700	5175	15525							13972
P7	7097*	1774*	5323*							
							5174	5174	14489	15524

* Accept figures which are slightly different to these due to rounding at different stages in arithmetical process

Task 3 Total for this task: 22 marks

06 Prepare a manufacturing account for the year ended 31 March 2014 based on actual costs.

[6 marks]

[includes 1 mark for quality of presentation]

Sammy Ltd Manufacturing account for year ended 31 March 2014

	£	
Raw materials consumed	576 000	(1)
Direct labour	148 000	(1)
Prime cost (1)*	724 000	(1) OF
Factory fixed costs	135 000	(1)
Cost of production (must be labelled)	859 000	(1) OF

Marker note:

Individual marks must be shown

Alien item in prime cost section: inclusion of opening or closing inventory is an alien – lose prime cost mark.

Alien item in factory indirect costs section lose cost of production mark.

Accept cost of manufacturing(goods)/production costs for final label.

* Presentation mark: 1 mark for label prime cost. This mark is given irrespective of inclusion of alien items in prime cost section.

07 Calculate the material sub-variances for the year ended 31 March 2014.

[6 marks]

Material price variance

32 000 (18.00* – 17.25) **(1 CF)** = £24 000 **(1 OF)** adverse **(1 OF)**

Material usage variance

17.25 (32 000 – 29 600**) **(1 CF)** = £41 400 **(1 OF)** adverse **(1 OF)**

6 marks

Marker notes:

* Price is £576,000/32,000

OF can arise if student fails to calculate £18 correctly.

** Quantity is 74 000 units x 0.4 metres

OF can arise if student fails to calculate 29 600 correctly.

Accept abbreviations of adverse and of favourable. However, do not accept brackets or minus signs instead of adverse

Alternative presentation**Material price variance**

32 000 metres should cost (17.25) 552 000 **(1 CF)**

32 000 metres actually cost	<u>576 000</u>	
Material price variance	<u>24 000</u>	(1 OF) adverse (1 OF)
Material usage variance		
74 000 units should use (0.4 metres)	29 600	m (1 CF)
74 000 units actually used	<u>32 000</u>	m
	2 400	m adverse
x standard cost per metre	<u>£17.25</u>	
Material usage variance	<u>£41 400</u>	(1 OF) adverse (1 OF)

08 Assess whether Sallyanne, the Finance Manager, will be pleased with the results for the year. Justify your answer.

[10 marks]

General content (maximum 8 marks)

More materials were used than expected **(1)** ($32\,000 - 29\,600 = 2\,400\text{m}$) **(1)** and the actual cost of each metre was 75p more expensive **(1)** (£18.00 - £17.25). The higher price may indicate that better quality materials were used **(1)**. The excess usage may indicate that there was more wastage **(1)**. Profit will reduce by £65 400 **(1)**. The adverse material variances reduce profits **(1)**.

Labour efficiency was as expected, but overall labour costs were less than expected **(1)**. The expected cost per dog coat was £2.10, giving a total cost of £155 400 **(1)** resulting in a favourable variance of £7400 **(1)** due to a reduction in the labour rate per hour **(1)**. The favourable variance will have a positive effect on profits **(1)**.

Factory fixed costs were less than expected **(1)** ($£147\,000 - £135\,000 = £12\,000\text{ fav}$) **(1)** which will have a positive effect on profit **(1)** and will reduce break-even point **(1)**.

Judgement (maximum 2 marks)

Agree/disagree **(1)** plus justification given that the target profit was £21 750, the results will reduce this to a forecast loss **(1)**.

Marker note

There are no marks for quoting the figures for material variances.

The maximum 8 marks for general content is further split as follows:

Max 4 marks for comments on materials.

Max 4 marks for comments on labour.

Max 2 marks for comments on fixed overheads.

Justification development must refer to the effect on target profit, ie it is enough to say there will be a negative effect on profits.

Explanations for variances: accept one valid explanation for each material variance.

Max 10 marks

Task 4

Total for this task: 29 marks

09 Calculate the payback period of the new machine in years and days.

[8 marks]

Cash flows

	<u>Year 1 (£)</u>	<u>Year 2 (£)</u>
Contribution (£3 x 80 000)	240 000 (1)	240 000
Training	(12 000) (1)	-
Fixed costs	(135 000) (1)	(135 000)
Bank loan	(35 000) (1)	(35 000)
Net cash flow	58 000 (1)	70 000 (1)

Payback $\text{£}110\,000 - \text{£}58\,000 = \text{£}52\,000$ (1 CF) = 1 year $(52/70 \times 365 \text{ days})$
= 1 year 272 days **(1 CF)**

Marker notes:

Workings must be shown for figures used in calculations of cashflows, otherwise award 0 marks.

Net cash flow for Year 1 £58000 award 5 marks.

No marks for student who rounds down rather than up for number of days, ie 271 days

8 marks

10 Calculate the net present value of the new machine.

[6 marks]

Year	Net cash flow	Discount rate	Present value	
0	(110 000)	1	(110 000)	(1)
1	58 000	0.870	50 460	(1) OF
2	70 000	0.756	52 920	(1) OF
3	70 000	0.658	46 060	(1) OF
4	70 000	0.572	40 040	(1) OF
	Net present value		79 480	(1) OF with label

Marker note

Individual marks must be shown

Award OF marks only where net cash flow is student's own calculation from task 09

6 marks

- 11** Advise the directors on whether they should buy the new machine or continue renting the current machine and purchase additional dog coats from the Far Eastern country. Consider the financial and non-financial implications of each option.

[15 marks]

[includes 2 marks for quality of written communication]

Financial implications (max 6 marks):

Buy new machine:

- Payback is short and net present value is positive **(1)**
- additional contribution is $5000 \times £3 = £15\,000$ **(1)** but will company be able to sell all additional production **(1)** or will levels of inventory increase **(1)**
- unless additional demand for dog coats exists, additional units may not be required **(1)**
- directors and shareholders may be reluctant to take on additional borrowing **(1)** which will increase gearing **(1)** and increase risk because secured on assets **(1)** and result in additional interest charges of £7500 per annum **(1)** can company afford interest payments **(1)** and would company be able to obtain the finance **(1)**
- cost of capital or forecasts may not be accurate or appropriate **(1)**.
- Negative influence on cashflow **(1)** and profits **(1)** of bank loan repayments and interest.
- Company will be liable to pay for training costs **(1)**.

Buy in additional units:

- no initial capital outlay **(1)** or additional borrowing **(1)**
- additional contribution is $5000 \times £2.80 = £14\,000$ **(1)** but this is 20p per unit less than achieved with new investment **(1)** but company will not need to buy in additional dog coats unless there is a demand for them **(1)**

Non-financial implications (max 5 marks)

Buy new machine:

- staff may resist training on the new machine/training may not be effective/training may delay production **(1)**.

Buy in additional units

- possible bad publicity **(1)** and backlash on purchases due to child labour rumours **(1)** shareholders may be unwilling to invest **(1)**
- three week delivery delay may adversely affect customer relations **(1)** resulting in lost business **(1)**
- damaged goods would have to be returned which may incur extra cost **(1)** and time delay **(1)**
- quality/reliability may not be as good as own manufactured items **(1)**

Max 11 marks

Decision **(1)** with justification **(1)**.

2 marks

Quality of written communication

2 marks – no more than 3 spelling, punctuation or grammatical errors.

1 mark – no more than 4 spelling, punctuation or grammatical errors.

0 marks – prose response is difficult to understand.

2 marks

Overall max 15 marks

Assessment grid

Question	AO1	AO2	AO3	QWC	Total	Topic	Syllabus Area
01	2	2			4	Calculate selling price	Marginal, absorption and activity based costing
02	2	2			4	Break-even plus target profit calculation	Marginal, absorption and activity based costing
03	2	5			7	Mark-up to achieve target profit	Marginal, absorption and activity based costing
04	3		3		6	Disadvantages of absorption costing	Marginal, absorption and activity based costing
05	3	14		1	18	Trade payables budget	Budgeting: further considerations
06		5		1	6	Manufacturing account	Manufacturing accounts
07		6			6	Material sub-variances	Standard costing and variance analysis
08			10		10	Assessment of results	Standard costing and variance analysis
09	3	5			8	Payback period	Investment appraisal
10	2	4			6	Net present value	Investment appraisal
11			13	2	15	Advice – financial and non-financial considerations	Investment appraisal/ Other factors affecting decision making: social accounting
Total in QP	17	43	26	4	90		

Computational – 68%

Written – 32%