



**General Certificate of Education (A-level)
June 2011**

Accounting

ACCN4

(Specification 2120)

**Unit 4: Further Aspects of Management
Accounting**

Final

Mark Scheme

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 events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process 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 standardisation each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised 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 candidates, mainly 17/18 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.

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.

<p>AO1: Knowledge and Understanding</p>	<p>Demonstrate knowledge and understanding of accounting principles, concepts and techniques.</p>
<p>AO2: Application</p>	<p>Select and apply knowledge and understanding of accounting principles, concepts and techniques to familiar and unfamiliar situations.</p>
<p>AO3: Analysis and Evaluation</p>	<p>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.</p>
<p>Quality of Written Communication (QWC)</p>	<p>In GCE specifications which require candidates to produce written material in English, candidates 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: 11 marks

01 Prepare a balance sheet extract to show the inventory (stock) held by Anastasia Ltd at 31 October 2010. (4 marks)
(for quality of presentation: plus 1 mark)

Extract from the Balance Sheet for Anastasia at 31 October 2010

Current assets (QWC (1))	£	
Inventory (stock) of raw materials	18 400	} (1) both
Inventory (stock) of work in progress	24 800	
Inventory (stock) of finished goods	<u>36 000</u>	(2) (W1)
	79 200	(1) OF no addition errors and only if finished goods is incorrect

4 marks

W1

$$45\,000 \times \left[\frac{1.00}{1.25} \right] (1) = £36\,000 (1) \text{ OF if ratio incorrectly applied}$$

Quality of presentation mark for correct heading-current assets

1 mark
5 marks

Alternative answer

Current assets (1)

Inventory raw materials	18 400	} (1)
Inventory of work in progress	24 800	
Inventory (stock) of finished goods	45 000	} (2)
Less provision	<u>(9 000)</u>	
	79 200	(1) OF

02 Explain, with reference to relevant accounting principles, how inventories (stock) should be valued on the balance sheet. (6 marks)

Inventory (stock) should be valued at the lower of cost and net realisable value **(1)** (IAS2) **(1)**. If the transfer price is used to value inventory (stock) then current assets will be overvalued **(1)** for profit which has not yet been realised **(1)** and cost of sales will be lower **(1)** and so profit will be overvalued too **(1)** unrealised profit should be deducted from the inventory value in the balance sheet **(1)**. **Max 3 marks**

This is an application of the prudence concept **(1)** (IAS1) **(1)** and ensures that assets and profit are not overstated **(1)** so that a true and fair view **(1)** can be given of the value of the business both within the balance sheet (current assets) and the income statement (profit and loss account) with the level of profit **(1)**.

Inventory (stock) must be valued in a consistent manner **(1)** year on year to ensure that comparisons can be made **(1)**.

Realisation concept can also be applied **(1)**. No other concepts are rewarded. **Max 3 marks**
6 marks

Task 2

Total for this task: 12 marks

03 Calculate the overhead absorption rate per labour hour. (3 marks)

The overhead absorption rate per labour hour is

$(44\,600 + 20\,600 + 140\,500 + 64\,500 + 127\,300) = \text{£}397\,500$ (1)/50 000 (1)
= £7.95 (per labour hour) (1) **OF** if £ incorrect and/or hours not units.

3 marks

Answer should be rounded to at least 2 decimal places.

04 Calculate the selling price per unit.

(5 marks)

The selling price is

	£
Direct materials (120 000/25 000)	4.80 (1)
Direct labour (200 000/25 000)	8.00 (1)
Overheads (£7.95 (1) OF x 2 (1))	<u>15.90</u> from 03
Total costs	<u>28.70</u>
Selling price x 1.2	£34.44 (1) OF

5 marks

Alternative approach

	£
Direct materials	120 000 (1)
Direct labour	200 000 (1)
Overheads	<u>397 500</u> (2) OF from 03
Total costs	<u>717 500</u>
Selling price 717 500/25 000 x 1.2 = £34.44 (1)OF	

05 Explain **two** limitations of using absorption costing as a method of calculating the selling price. (4 marks)

One mark for a valid limitation plus 1 mark for development.

Two possible limitations of using of absorption costing used to calculate the selling price are:

- the basis used to calculate the OAR may not be relevant for all the overheads in the production department leading to an inaccurate selling price
- with improvements in new technology there may be a reduction in the use of labour hours as a relevant basis leading to under absorption of the overheads within the selling price
- in general calculating OAR based on units does not distinguish between the different consumption of overheads in different departments leading to over or under absorption for a particular product
- apportionment of service departments overheads to production departments may be too arbitrary, leading to inaccurate selling price
- all figures are estimated therefore may lead to an over or under absorption within the selling price.

2 x 2 marks
Max 4 marks

Task 3

Total for this task: 34 marks

06 Prepare a statement to show both the expected contribution and the expected profit for the year ended 31 March 2011. (8 marks)

	£	
Sales (20 000 x £60)	1 200 000	(1)
Direct materials (£14 (1) x 20 000)	280 000	(1) OF if cost per unit is incorrect not units
Direct labour (£18 (1) x 20 000)	<u>360 000</u>	
Contribution	560 000	(1) OF must be labelled
Fixed overheads	<u>300 000</u>	(1)
Profit	<u><u>260 000</u></u>	(1) OF must be labelled

8 marks

Alternative approach

Contribution 60 - (14 + 18) x 20 000 = 560 000 **(1) OF with correct label**
(1) (1) (1) (2)
 Or 28 x 20 000
(3) (2)

F.C 300 000 **(1)**
 Profit 260 000 **(1) OF with correct label**

Or
 Sales 1 200 000 **(1)**
 Less direct costs (14 – 18) x 20 000 640 000 **(2) OF**
(1) (1)
 Contribution 560 000 **(1) OF with correct label**
 F.C 300 000 **(1)**
 Profit 260 000 **(1) OF with correct label**

560 000 is worth 6 marks with a correct label.

260 000 is worth 2 marks with a correct label.

07 Calculate the total variances for:

- direct materials
- direct labour.

(6 marks)

Material total variance

$$(18\,000 \times 14) - 252\,000 \text{ (1)} = \text{£}0 \text{ (2)}$$

Labour total variance

$$(18\,000 \times 18) - 306\,000 \text{ (1)} = \text{£}18\,000 \text{ (1) fav (1)}$$

6 marks

08 Calculate the sales price and sales volume sub-variances.

(6 marks)

Sales price variance

$$18\,000 (62 - 60) \text{ (1)} = \text{£}36\,000 \text{ (1) fav (1)}$$

Sales volume variance

$$60 (18\,000 - 20\,000) \text{ (1)} = \text{£}120\,000 \text{ (1) adv (1)}$$

6 marks

09 Prepare a statement reconciling actual profit with budgeted profit for the year ended 31 March 2011. (6 marks)

Statement to reconcile actual profit with budgeted profit for the year ended 31 March 2011.

	£
Budgeted profit (£560 000 – £300 000)	260 000 (1) OF from 06
Lost contribution (£28 (1) OF x 2000 (1))	56 000 (2)
Suggested profit for actual production	<u>204 000</u>
Sales price variance - fav	36 000 (1) OF from 08
Labour total variance - fav	<u>18 000</u> (1) OF from 07
Actual profit	<u><u>258 000</u></u> (1) CF label no aliens

6 marks

If variance added to 54 000 **(2)**

Alternative answer:

Flexed Budgeted Profit

Budgeted profit for actual production	204 000
(28 (1) OF x 18 000 (1) – 300 000 (1))	
Plus sales price variance	36 000 (1) OF
Plus labour variances	<u>18 000</u> (1) OF
Actual profit	<u><u>258 000</u></u> (1) label no aliens

10 *Assess the effectiveness of using variance analysis to evaluate the performance of Yusuke's business. Make reference to the variances calculated. (8 marks)*

Yusuke is able to identify areas requiring improvement **(1)**, as well as an explanation for the reduction in profit of £2 000 between expected and actual profit **(1)**. If a particular area of weakness is identified then corrective action can then be taken by each budget manager **(1)**. Here there has been a decrease in the number of units sold perhaps due to the increase in price from £60 to £62 **(1)**.

With the use of sub variances he can locate particular areas to investigate **(1)**, for example the adverse sales total variance of £84 000 **(1)**. Materials price sub variance is £7 000 adverse **(1) OF** and materials usage £7 000 favourable **(1) OF**. Labour rate variance £18 000 adverse **(1) OF** and labour efficiency is £36 000 favourable **(1) OF**.

The total variances for materials and labour may have sub variances which are adverse **(1)** which are covered by larger favourable variances but may still need to be investigated **(1)**. However a variance may only have been caused by incorrect budget setting **(1)**. This sets unrealistic targets and large adverse variances can occur **(1)**, which if viewed negatively can de-motivate the staff **(1)**. The variances may have arisen outside the control of the business **(1)**, eg external factors **(1)**.

Conclusion/judgement on the effectiveness of using variances **(0-2)** marks. **Max 8 marks**

Task 4

Total for this task: 33 marks

11 Prepare a production budget for each of the three months ending 31 July 2011.
(8 marks)

	May	June	July
Sales	2 700	2 800	2 600 (1) row
Opening inventory	(270) (1)	(280) (1)	(260) (1)
Closing inventory	280	260	270 (1)
Production	2 710 (1) OF	2 780 (1)OF	2 610 (1) OF only if closing inventory incorrect but process is correct and in units

8 marks

12 Explain the financial implications of the decision to purchase the units from Ogo Ltd.
(5 marks)

Max 4 for calculations and comments.

1 mark for 'change in contribution/profit' compared to making the product themselves.

Extra units purchased from supplier (2710 – 1600) = 1110 **(1) OF**.

1110 x £2 **(1) (W1)** = £2220 **(1) OF** positive contribution **(1)**.

Usual contribution is 1110 x £4 **(1) (W2)** = £4440 **(1) OF** change of 50% in contribution/profit **(1) OF**.

W1 (SP–VC) 16 - (11+3) = £2 **(1) OF**.

W2 (SP VC) 16 - (8.60+3.40) = £4 **(1) OF**.

Max 5 marks

Alternatively

(4 -2) **(1)** x 1110 **(1)** = £2220 **(1)**. Change in contribution/profit **(1)**.

Accept original profit/contribution for month £10840 **(2)** new profit/contribution £8620 **(2)** equals a difference of £2220 **(1)** max 4 marks. Therefore decrease in profit **(1)**.

13 Calculate the net present value for Option 2. (9 marks)
 (for quality of presentation: plus 1 mark)

The net present value of the replacement machine

Year	net cash flow £	Discount factor	Present Value £	
0	350 000	1	(350 000)	(1)
1	95 000 W1 (1)	0.909	86 355	(1) OF
2	95 000	0.826	78 470	(1) OF
3	92 500 W2 (2)	0.751	69 467.50	(1) OF
4	92 500	0.683	63 177.50	(1) OF
	Net present value (1) QWC*		(52 530)	(1) OF

W1 $30\,000 \times £4 = £120\,000 - £25\,000 = £95\,000$ **(1)**

W2 $30\,000 \times £4 = £120\,000 - £27\,500$ **(1) = £92\,500 (1) OF**

9 marks

*Quality of presentation:
For identifying net present value.

1 mark

- 14** Advise the production manager which action he should choose. Consider both the financial and non-financial implications of each option. (8 marks)
(for quality of written communication: plus 2 marks)

Option 1

The lease will cost £84 000 (1) per year which is a cost of £336 000 (1) over the 4 years, which is less than the original cost of Option 2 (1). The contribution taken during this time is: $28\,000 \times £4 = £112\,000$ $\times 4 = £448\,000$ (1).

Profit is $£448\,000 - £336\,000 - £105\,000 = £7\,000$ (1).

This would have to be discounted to give a like with like comparison (1). However, the business is getting the benefit of maintenance cover without extra cost (1). At the end of the 4 year lease the machine cannot be sold (1). This machine is also £14 000 cheaper than option 2 (1). This produces 2000 units (1) less than option 2 at £16 each = £32 000 (1). Not a permanently binding contract (1). **Max 3 marks**

Option 2

The net cash flow over the life of Option 2 is $£375\,000 - £350\,000 = £25\,000$ (1). However, the replacement machine has a negative net present value (1) over 4 years and therefore as the sum of the future net cash flows does not cover the initial cost of investment (1) the machine should not be purchased (1). Maintenance costs for this machine are unknown but will further decrease the net cash inflow and therefore may increase the negative net present value even further (1). Need to consider the cost of financing the purchase (1).

Max 3 marks

Advice – final judgement (1) reason for final decision (1).

2 marks

Overall 8 marks

Quality of written communication (QWC) awarded for well structured prose responses and accurate spelling punctuation and grammar.

- for 2 marks: The candidate must have no more than 2 spelling, punctuation or grammar errors
- for 1 mark: The candidate will have 3 or more spelling, punctuation or grammar errors, but the meaning is clear
- for 0 marks: The candidate response is limited and/or difficult to understand
- a repeated spelling punctuation or grammar error only counts as one mistake. **2 marks**

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