



A-LEVEL **Accounting**

Unit 4 Further Aspects of Management Accounting
Mark Scheme

2120
June 2015

Version 1.0 Final

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 2015**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.

1

Total for this question: 25 marks

1 (a) Prepare a trade receivables budget for each of the first **two** quarters of the company's first year of trading, July – September 2015 and October – December 2015.

[7 marks]

	July – September £		October – December £	
Opening balance	-		19 200	
Sales	48 000		72 000	(1 for both)
Cash received	(28 640)	(1)	(61 840)	(1)
Bad debts written off	(160)	(1)	(560)	(1)
Closing balance	19 200	(1of)	28 800	(1of)

Workings

Month	Sales	1 month	2 months	Cash received	Write off
July	16 000				
August	16 000	12 800			
September	16 000	12 800	3 040	28 640	160
October	24 000	12 800	3 040		160
November	24 000	19 200	3 040		160
December	24 000	19 200	4 560	61 840	240

Marker notes:

- Students using their own format with 6 columns, ie a month by month approach: award marks for bad debt in month 3, balance at beginning of month 4 b/f (OF), balance at the end of month 6 (OF), ie maximum 3 marks.
- If the closing balance from Q1 is not carried forward as the opening balance on Q2, do not reward the closing balance on Q2.
- Workings not used in final answer: no marks.
- Please note the sales figure is worth 1 mark for *both* quarters.

- 1 (b)** Prepare a budgeted manufacturing account for the year ending 30 June 2016.
[9 marks]
[includes 1 mark for quality of presentation]

Updike Ltd
Budgeted manufacturing account for the year ending 30 June 2016

	£	£
Raw materials		
Opening inventory	-	
Purchases	86 240	
Less: Closing inventory	(9 400) (1)	76 840
Direct labour		71 600
Prime cost **		<u>148 440 (1of)</u>
Overheads		
General factory expenses	22 000	
Indirect wages	27 000	
Rent, rates and insurance (42 000 x 80%)	33 600 (1)	
Supervisor's salary	20 000	
Depreciation – machinery ((45 000 – 5 000) / 5)	8 000 (1)	
Total factory overheads		<u>110 600(1)</u>
		<u>259 040</u>
Opening work in progress	-	
Closing work in progress	(12 800)	(12 800) (1)
Production cost of finished goods **		<u>246 240 (1of)</u>
Add: factory profit		49 248 (1of)
Transfer price		<u><u>295 488</u></u>

Quality of presentation

Two correct labels ** (1)

Marker notes:

- Aliens contaminate a section, ie an alien with the prime cost section results in the loss of the subtotal mark for prime cost, etc.
- Where a student does not clearly identify sections within the manufacturing account, the student is liable to lose the prime cost subtotal mark and the subtotal mark for overheads.
- The marks for the subtotal figures and the final total figure can be awarded if no labels shown (as labels are separately rewarded).
- Label mark: be flexible about the labels for 'production cost of finished goods'– accept appropriate alternatives; the prime cost label must be alongside the student's own figure for prime cost; the production cost label must be for the subtotal before adding the factory profit.

1 (c) Prepare a budgeted income statement for the year ending 30 June 2016. **[9 marks]**
[includes 1 mark for quality of presentation]

Updike Ltd
Budgeted income statement for the year ending 30 June 2016

	£	£	
Revenue		360 000	(1)
Opening inventory finished goods	-		
Production	295 488		
Closing inventory finished goods	<u>(22 080)</u>	<u>(273 408)</u>	
Gross profit for the year **		86 592	(1of)
Less: expenses			
Administration salaries	18 000*		
Carriage outwards	6 000*		
Sales salaries	29 000*		
Rent, rates and insurance	8 400*		
Bad debts written off	2 640* (*1)		
Depreciation – delivery vehicles	<u>7 000 (1)</u>	<u>(71 040)</u>	
		15 552	
Add: factory profit	49 248 (1of)		
Less: provision for unrealised profit W1	<u>(3 680) (2)*</u>	<u>45 568</u>	
Profit for the year **		<u><u>61 120</u></u>	(1of)

* 1 mark for all five correct figures

Quality of presentation

Two correct labels ** (1)

Marker notes:

- Accept: gross profit, profit for year, net profit (or own figure loss for year, net loss; gross loss); do not accept abbreviations such as GP, NP etc; do not accept other labels

W1

Provision for unrealised profit: $22\,080 \times 20/120 = 3\,680$

Marker notes:

- Provision for unrealised profit: $22\,080 \times 20/120 = 3\,680$ (1) + (1) (correct treatment of own figure within income statement, ie deducted from factory profit). Students must support an own figure for the provision with workings. Give mark for 3 680 even if not used in financial statement.
- The own figure for mark for gross profit is dependent on the transfer of own figure for production from task (b).

2 Total for this question: 17 marks

2 (a) Calculate the budgeted profit for March 2015. **[2 marks]**

Variable cost per unit = (6kg x £5) + (3hrs x £6) = £48
 Selling price = £48 x 100/80 = £60 (1 OF)
 Unit profit = £60 - £48 = £12
 Budgeted profit = (5000 x £12) - £12 500 = £47 500 (1)

Marker note:

- Award **1of** mark for a selling price of £63.125. Do not accept any other figures.

2 (b) Calculate the actual profit for March 2015, clearly identifying contribution and profit for the month. **[2 marks]**

Sales (4800 x £60)		288 000	
Direct materials	141 360		
Direct labour	99 000	240 360	
Contribution (must be labelled)		47 640	(1of)
Fixed costs		12 500	
Profit for the month (must be labelled)		35 140	(1of)

Marker notes:

- The OF for contribution is dependent on the use of own figure for selling price from 2(a). Unless sales are given as £288,000, markers must check back to 2(a).
- The final label could be 'profit'.
- If a student omits fixed costs accept own figure labelled profit for one mark.

2 (c) Calculate all material and labour sub-variances for March 2015. **[8 marks]**

Material price:	30 400kg should cost (£5)	152 000	
	Actually cost	141 360	
		£10 640	(1) Favourable (1)

Material usage:	4800 units should use (6kg)	28 800kg	
	Actually used	30 400kg	
		1 600kg	

X standard cost	£5		
	£8 000	(1)	Adverse (1)

Labour rate:	15 840 hrs should cost (£6)	95 040	
	Actually cost	99 000	
		£3 960	(1) Adverse (1)

Labour efficiency:	4800 units should take	14	
	(3hrs)	400hrs	
	Actually took	15	
		840hrs	
		1 440hrs	
	X standard cost	£6	
		£8 640	(1) Adverse (1)

Marker notes:

- Accept abbreviations: F/Fav (favourable) A/Adv (adverse); do not accept brackets as an indication of adverse – ignore the use of brackets.

Examples for material price: £10 460 (1)

(£10 460) (1) (ie brackets ignored – mark is for correct figure)

£10 460 (1) Favourable (1) (as per mark scheme)

(£10 460) (1) Adverse (0) (ie brackets ignored for figure – no mark for incorrect direction)

- Figures are accepted without £ sign.
- Each variance must be clearly identified as material price, material usage, etc.
- The variance amount must be correct in order to qualify for the direction mark (i.e. Favourable or Adverse)

2 (d) *Explain, with examples from the results of Irving Ltd, what is meant by the interrelationship between cost variances.*

[5 marks]

The interrelationship between variances means that the cause of one sub-variance could lead to the occurrence of another sub-variance **(1)**.

For example, the £10 640 favourable variance on material price, could indicate that lower quality material had been purchased **(1)**. This in turn could affect the following:

- Material usage variance £8000 adverse – more wastage of material could have resulted **(1)**.
- Labour rate variance £3960 adverse – could have resulted in overtime payments to remedy faults **(1)**.
- Labour efficiency variance £8640 adverse – lower quality material could have resulted in slower production processes **(1)**.

Marker notes

- Allow other reasonable examples dependent on answers to part 2(c).
- Examples must be based on the details in 2(c) – figures need not be quoted.
- Examples must demonstrate an interrelationship between at least two variances.
- There is no mark for explaining just one variance.
- Students can be rewarded for linking any two variances (2 marks)

3

Total for this question: 20 marks

3 (a) Calculate the net cash inflows from production for both machines for each of the three years.

[6 marks]

Current machine

Year	Units	Unit contribution (£)	Total contribution (£)	Maintenance (£)	Cash flow (£)
1	80 000	1.00	80 000	5 000	75 000 (1)
2	60 000	0.87	52 200	5 000	47 200 (1)
3	20 000	0.87	17 400	5 000	12 400 (1)

New machine

Year	Units	Unit contribution (£)	Total contribution (£)	Maintenance (£)	Cash flow (£)
1	80 000	1.30	104 000	1 000	103 000 (1)
2	60 000	1.18	70 800	1 500	69 300 (1)
3	20 000	1.18	23 600	2 000	21 600 (1)

Marker notes:

A common error is to include depreciation in the calculations where this occurs the net cash flows are:

Current machine: Year 1 £51,000; Year 2 £29,200; Year 3 £6,400 (Award 2 marks)

New machine: Year 1 £55,000; Year 2 £33,300; Year 3 £9,600 (Award 2 marks)

All three cash flows for a machine must be as shown here to receive 2 marks

3 (b) Calculate the net present value of both machines.

[10 marks]

Current machine				New machine			
Year	Cash flow	D/F	PV	Cash flow	D/F	PV	
0				(100 000)	1	(100 000)	(1)
1	75 000	0.870	65 250	(1of) 103 000	0.870	89 610	(1of)
2	47 200	0.756	35 683	(1of) 69 300	0.756	52 391	(1of)
3	12 400	0.658	8 159	(1of) 21 600	0.658	14 213	(1of)
				80 000		52 640	(1of)
		NPV	109 092	(1of)	NPV	108 854	1(of)

Marker notes:

- If students use brackets incorrectly (that is the investment is shown without brackets, the yearly present values are shown with brackets) ignore the problem as long as this is consistent across all figures. Where this occurs award maximum 3 for current machine and maximum 5 for new machine.
- If students include a cash outflow in year 0 for the current machine, do not treat as an alien and award 1(of) mark for the net present value, providing it is arithmetically correct.

3 (c) State **two** benefits and **two** drawbacks to the company of purchasing the new machine.

[4 marks]

Benefits

- Short payback period (less than one year) **(1)**
- Less maintenance costs **(1)**
- Less chance of breakdowns **(1)**
- Variable costs are less than for the current machine **(1)**
- Substantial cash inflow at the end of 3 years **(1)**

Drawbacks

- Large capital outlay required **(1)**
- Based on NPV, decision is very sensitive to downturn in demand **(1)**
- Based on NPV, decision is very sensitive to shortfall in estimated sales value of machine **(1)**
- Fixed costs are higher than for the current machine **(1)**
- Need to raise finance **(1)**

Marker notes:

- Accept answers based on their own net present value in 3(b)
- Do not accept any other points.

Max 2 marks for benefits and 2 marks for drawbacks. Overall max 4 marks.

4

Total for this question: 28 marks

4 (a) Identify which of the following is the limiting factor in respect of Ishiguro plc's budget. (Tick **one** box only.)

[1 mark]

	✓
Labour hours	
Machine hours	✓
Material supply	

4 (b) Prepare a statement showing the maximum monthly profit that can be earned until the faulty machine is repaired.

[10 marks]

	Basic (£)	Hi Tech (£)	Ultimo (£)	
Selling price	210	320	510	
Direct materials	75	109	205	
Direct labour	35	50	115	
Contribution	100	161	190	
Machine hours required	2.5 hrs	3.5 hrs	5 hrs	(1)
Contribution per machine hour	£40	£46	£38	(1)
Ranking	2	1	3	(1)

Marker notes:

- Award 3 marks if student shows correct contributions per machine hour.
- The own figure for contribution per machine hour is awarded where the clearly identified contribution has been divided by the correct number of machine hours.
- Rank order: 1 mark for their own rank order, based on student's own working.

Production plan

	Units	Hours used	Unit Contribution	Total
Hi Tech	60	210	161	9 660
Basic	60	150	100	6 000
Ultimo	8 (1of)	40	190	1 520
Total contribution				<u>17 180</u> (1of)
Fixed costs production	Units	Rate	Total	
Hi Tech	60	£42	2 520	
Basic	60	£30	1 800	
Ultimo	8	£60	480	(4 800) (1 of)
Fixed costs other				
Hi Tech	60	£24	1 440	
Basic	60	£24	1 440	
Ultimo	8	£8	64	(2 944) (1 of)
				<u>9 436</u>
Under absorbed – Prod'n fixed costs	12	£60	720 (1)	
Under absorbed - Other fixed costs	12	£8	96 (1)	(816)
Maximum profit				<u><u>8 620</u></u> (1 of)

Marker notes:

- If under absorption not shown separately, award marks as follows

Fixed costs production £5520 **(2 of)**
 Fixed costs other £3040 **(2 of)**

- The production plan must be checked against the student's ranking in the answer to 4(b).
- If under-absorption omitted award **1of** mark for final answer (ie student's figure for maximum profit).

4 (c) Discuss the issues that the directors of Ishiguro plc should consider before making a final decision on the robotic production systems. Consider both financial and non-financial issues.

[17 marks]

[includes 2 marks for quality of written communication]

Financial issues (Overall maximum mark 9)	
Issue	Development (examples) (maximum 2 marks for development per issue)
Borrowing from bank/investment (1)	Will they be able to raise finance (1) bank's assessment of ability to repay/make interest payments (1) effect of repayments/interest charges on liquidity (1) effect of interest charges on profit (1) increase in gearing ratio (1) implications of higher gearing ratio (1)
Share issue/investment (1)	Will share issue be successful (1) possible effect on control (1) shares a permanent source of finance (1) effect on gearing ratio (1) implication of lower gearing (1) impact of dividends payments on cash flow (1) impact of dividends on retained profits (1)
Redundancy costs (1)	Effect on profit (1) effect on liquidity (1)
Investment appraisal (1)	Has investment appraisal been conducted (1) what does investment appraisal indicate (1)
Reliability of estimates (1)	What factors could affect reliability (1) forecasts bound to be uncertain (1)
Training costs (1)	Cost of training and its impact on cash (1) profit (1)

Non-financial issues (Overall maximum mark 9)	
Issue	Development (examples) (maximum 2 marks for development per issue)
Loss of children's play area (1)	Bad publicity (1) local opposition (1) effect on reputation (1) loss of customers (1) effect on success of share issue (1)
Redundancy (1 if not already awarded as a financial issue) (Do not award any additional development marks if already awarded in financial issues.)	Effect on local economy (1) trade union involvement (1) bad publicity (1) morale of workforce (1) potential loss of productivity (1) effect on success of share issue (1)
Training (1 if not already awarded as a financial issue) (Do not award any additional development marks if already awarded in financial issues.)	Staff reluctance (1) will staff be able to benefit from training (1) impact on production while training in progress (1)
Risk of obsolescence (1)	Possibility of rapid technological advances (1) impact on company's competitiveness (1) loss of sales revenue (1)
Reliability of robotic systems (1)	Is there a contingency plan if systems fail (1) potential loss of production (1) customer dissatisfaction (1)

Overall maximum for financial and non-financial factors (15 marks)

Marker note:

- There is no mark for raising an issue if there is no development.

Quality of written communication (2)

2 marks: no more than 3 spelling, punctuation and grammatical errors and technical language used appropriately.

1 mark: more than 3 spelling, punctuation and grammatical errors.

0 marks: where written work hinders understanding

Overall max 17