Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
TOTAL	

AQA

General Certificate of Education
Advanced Level Examination
June 2015

Accounting ACCN4

Unit 4 Further Aspects of Management Accounting

Monday 15 June 2015 1.30 pm to 3.30 pm

For this paper you must have:
- a calculator.

Time allowed
- 2 hours

Instructions
- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- All workings must be shown and clearly labelled; otherwise marks for method may be lost.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 90.
- You will be marked on your ability to:
  - use good English
  - organise information clearly
  - use specialist vocabulary where appropriate.

Answer **all** questions in the spaces provided.

1 **Total for this question: 25 marks**

Updike Ltd is to commence trading on 1 July 2015, manufacturing office cabinets. All sales will be on credit. The directors forecast the following sales for their first year of trading:

July–September 2015	£16 000 **per month**
October–December 2015	£24 000 **per month**
January–March 2016	£32 000 **per month**
April–June 2016	£48 000 **per month**

The directors expect 80% of their customers to settle their accounts in the month after sale. Of the remaining amounts outstanding, the directors expect to receive 95% two months after sale and to write off the remainder as bad debts.

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]

Workings

Do not write outside the box

Updike Ltd
Trade Receivables Budget

	July–September £	October–December £

The following budgeted information is available for the company's first year of trading, ending 30 June 2016:

Costs

	£
Administration salaries	18 000
Bad debts written off	2 640
Carriage outwards	6 000
Direct labour	71 600
Factory supervisor's salary	20 000
General factory expenses	22 000
Indirect wages	27 000
Purchase of raw materials	86 240
Rent, rates and insurance	42 000
Sales department salaries	29 000

Non-current assets at cost

Machinery	45 000
Delivery vehicles	28 000

Inventory at 30 June 2016

Raw materials	9 400
Work in progress	12 800
Finished goods	22 080

Additional information

(1) Finished goods are transferred from the factory at cost plus 20%.
(2) Rent, rates and insurance are to be charged 80% to the factory and 20% to the office.
(3) All non-current assets will be purchased on 1 July 2015.
(4) The directors expect that the machinery will have an estimated useful life of five years and that the estimated residual value at the end of five years is £5000. Depreciation is to be charged on machinery using the straight-line method.
(5) Delivery vehicles are used only for delivering finished goods to customers.
(6) Depreciation is to be charged on delivery vehicles at 25% using the reducing balance method.

1 (b) Prepare a budgeted manufacturing account for the year ending 30 June 2016.

[9 marks]
[includes 1 mark for quality of presentation]

Workings

Question 1(b) continues on the next page

Do not write outside the box

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

	£	£

Turn over for the next question

This is a repeat of the information given on page 4

The following budgeted information is available for the company's first year of trading, ending 30 June 2016:

Costs

	£
Administration salaries	18 000
Bad debts written off	2 640
Carriage outwards	6 000
Direct labour	71 600
Factory supervisor's salary	20 000
General factory expenses	22 000
Indirect wages	27 000
Purchase of raw materials	86 240
Rent, rates and insurance	42 000
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Non-current assets at cost

Machinery	45 000
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Additional information

(1) Finished goods are transferred from the factory at cost plus 20%.
(2) Rent, rates and insurance are to be charged 80% to the factory and 20% to the office.
(3) All non-current assets will be purchased on 1 July 2015.
(4) The directors expect that the machinery will have an estimated useful life of five years and that the estimated residual value at the end of five years is £5000. Depreciation is to be charged on machinery using the straight-line method.
(5) Delivery vehicles are used only for delivering finished goods to customers.
(6) Depreciation is to be charged on delivery vehicles at 25% using the reducing balance method.

1 (c) Prepare a budgeted income statement for the year ending 30 June 2016 using the information from parts 1(a) and 1(b).

[9 marks]
[includes 1 mark for quality of presentation]

Workings

Question 1(c) continues on the next page

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

	£	£

25

2 **Total for this question: 17 marks**

Irving Ltd manufactures one product. The company operates a system of marginal costing.

The following are the standard cost data for one unit of the product.

Direct material	6 kg @ £5 per kg
Direct labour	3 hours @ £6 per hour

The budgeted selling price was calculated to give a profit of 20% on the selling price.
Fixed production costs were budgeted to be £12 500 per month.
The budgeted production and sales for March 2015 was 5000 units.

There was no opening or closing inventory of direct materials or finished goods in March 2015.

The actual data for March 2015 were as follows.

Direct material	30 400 kg costing £141 360
Direct labour	15 840 hours costing £99 000
Actual production and sales	4800 units sold at budgeted selling price
Fixed production costs	£12 500

2 (a) Calculate the budgeted profit for March 2015.

[2 marks]

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

[2 marks]

Do not write outside the box

2 (c) Calculate all material and labour sub-variances for March 2015.

[8 marks]

Do not write outside the box

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

[5 marks]

Extra space

17

Turn over for the next question

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ANSWER IN THE SPACES PROVIDED

3 **Total for this question: 20 marks**

Roth Ltd manufactures one part for the mobile phone industry.

The directors are considering selling an old machine that had a capital cost of £260 000 and replacing it with a newer, more efficient model at a cost of £220 000. The directors have been told that if they purchase the new machine immediately, they will receive £120 000 allowance in part exchange for their current machine.

The directors are aware that technology changes very quickly in the mobile phone industry and they feel that demand for the part will show considerable decline over the next three years. Both machines are capable of meeting the expected demand.

The directors estimate the following demand.

Year 1	80 000 units
Year 2	60 000 units
Year 3	20 000 units

After year 3, the directors feel that demand will be zero.

The following information is available for both machines:

	Current machine (£ per unit)	New machine (£ per unit)
Direct materials	1.80	1.80
Direct labour	0.80	0.60
Variable overheads	0.40	0.30
Fixed overheads – depreciation	0.30	0.60

Additional information

(1) The selling price of the part is £4.00 and the directors expect this will remain the same for the next three years.
(2) The directors expect the cost of direct materials and direct labour to increase by 5% at the start of year 2 and will then remain constant for the following year.
(3) The directors estimate that maintenance costs on the current machine will be £5000 per annum. This machine is expected to have zero value at the end of year 3.
(4) The directors estimate that maintenance costs for the new machine will be £1000 for the first year and that this will increase by £500 for each subsequent year.
(5) The directors estimate that the sale value of the new machine at the end of year 3 will be £80 000.
(6) The directors have calculated the payback period of the new machine to be 355 days.

The company's cost of capital is 15%. The following is an extract from the net present value table for £1.

	15%
Year 1	0.870
Year 2	0.756
Year 3	0.658
Year 4	0.572

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

[6 marks]

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

[10 marks]

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

[4 marks]

Benefits

Drawbacks

Extra space

20

4 **Total for this question: 28 marks**

Ishiguro plc is a successful manufacturing business based in a rural part of southern England. One division of the company manufactures three models of laptop computer: the Basic, the Hi-tech and the Ultimo. Each model is produced using highly specialised machinery.
The following information is available for one unit of each model:

	Basic	Hi-tech	Ultimo
	£	£	£
Selling price	210	320	510
Direct materials	75	109	205
Direct labour	35	50	115
Fixed production costs	30	42	60
Other fixed costs	24	24	8
Profit	46	95	122
Expected monthly demand	60 units	60 units	20 units

Additional information

(1) No inventory is held.
(2) Budgeted fixed production costs are absorbed on a machine-hour basis at a rate of £12 per machine hour.
(3) Other fixed costs are absorbed based on the expected monthly demand.
(4) Due to a serious machine fault, only 400 machine hours will be available for each of the next three months until specialist machine parts can be obtained.
(5) The division has six production employees, and no overtime will be required in the coming three months to meet monthly demand.
(6) Suppliers have assured the directors that sufficient direct material will be available in the coming three months to meet monthly demand.

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]

Ishiguro plc has six divisions, each concentrating on different areas of technology. The company has grown rapidly over the past five years, though growth has recently slowed due to competition from the USA and Korea. The company currently employs over 80 technical and production staff in a purpose-built factory.

In an effort to reverse the slowdown in growth, the directors are investigating the possibility of investing in highly mechanised robotic production systems throughout the six divisions. The mechanisation would involve extending the factory premises, and the directors have had initial discussions with the local council with a view to purchasing adjoining land. The land is currently in use as a children's play area.

This mechanisation and expansion would cost an initial outlay of £3.5 million, but would result in significant savings on staff costs and operating costs. The directors estimate that turnover could increase by 20% per annum over the next five years and that profits could grow by 5% per annum. The directors plan to have initial meetings with their bankers to discuss the arrangement of finance. The Finance Director has also suggested the possibility of a new share issue.

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]

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Extra space

28

END OF QUESTIONS