



Oxford Cambridge and RSA

**Tuesday 21 June 2016 – Morning**

**GCSE MANUFACTURING**

**B232/02 Manufacturing Processes**



Candidates answer on the Question Paper.

**OCR supplied materials:**

None

**Duration: 1 hour**

**Other materials required:**

None



Candidate forename		Candidate surname	
--------------------	--	-------------------	--

Centre number						Candidate number			
---------------	--	--	--	--	--	------------------	--	--	--

**INSTRUCTIONS TO CANDIDATES**

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

**INFORMATION FOR CANDIDATES**

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **60**.
- Your Quality of Written Communication will be assessed in the question marked with an asterisk (\*).
- This document consists of **12** pages. Any blank pages are indicated.

1 Manufacturing sectors produce different products.

(a) Complete the table below by giving **one** example of a product made in each of the manufacturing sectors given.

Manufacturing Sector	Product
<b>Food and drink</b>	
<b>Furniture</b>	
<b>Electrical</b>	
<b>Chemical and pharmaceutical</b>	

[4]

(b) Name **two** manufacturing sectors **different** to those shown above.

1 .....

2 .....

[2]

2 Name a product that you have made or are familiar with.

Product .....

(a) State **two** processes used when making this product.

1 .....

2 .....

[2]

(b) Describe the use of **one** tool or piece of equipment used when making the product.

.....

.....

.....

[2]

(c) Describe **two** safety precautions, other than PPE (Personal Protective Equipment), that should be taken when making the product.

1 .....

.....

.....

[2]

2 .....

.....

.....

[2]

3 Many things are considered when selecting suitable materials for use in manufactured products.

The table below shows a comparison of six different materials.

Material	Factors to be considered				
	Ease of storage	Ease of handling	Value for money	Safe to work with	Availability
A	2	8	7	3	5
B	3	4	8	9	7
C	2	4	1	6	3
D	3	9	6	5	6
E	7	2	1	3	6
F	2	5	4	6	3

**10 = excellent and 1 = very poor**

(a) State which material would be the easiest to handle.

.....

[1]

(b) Give **two** reasons why material B would be best suited for making a prototype product.

1 .....

.....

2 .....

.....

[2]

(c) Explain how the information in the table could be used to identify the best material for the **workforce** to use.

.....

.....

.....

[3]

4 Manufacturing companies continually develop products.

(a) Give **two** examples of how research is used in the development of products.

1 .....

.....

[2]

2 .....

.....

[2]

(b) Explain why CAD/CAM is a useful resource for product development.

.....

.....

.....

[3]

5 Robotic technology is increasingly being used in manufacturing operations.

(a) Describe, using **one** example, how robots are used when manufacturing products.

.....  
.....  
.....  
.....

[3]

(b) Describe **two** benefits of using robotics for a manufacturing company.

1 .....

.....  
.....

.....

.....

[2]

2 .....

.....  
.....

.....

.....

[2]

(c) Describe **one** disadvantage of introducing automation for a company to manufacture products.

.....  
.....  
.....  
.....

[2]

6 The list below gives stages in the design of a new product.

Client brief	Producing design ideas	Presenting design ideas
Modifying designs	Prototyping	

(a) Describe what takes place in the following stages:

(i) Producing design ideas .....

.....

..... [2]

(ii) Modifying designs .....

.....

..... [2]

(b) Explain how modern technology could be used during the following design stages.

(i) Client Brief

.....

.....

.....

..... [3]

(ii) Prototyping

.....

.....

.....

..... [3]

7 (a) Explain why quality control is important when manufacturing products.

.....

.....

.....

.....

[3]

(b) Describe **one** quality control check carried out during the manufacture of a product that you have made or are familiar with.

.....

.....

.....

[2]

(c) Explain, using **one** example, the use of modern technology in quality control.

.....

.....

.....

.....

[3]

**8\*** Discuss the effects of using systems and control technology on the quality of manufactured products.

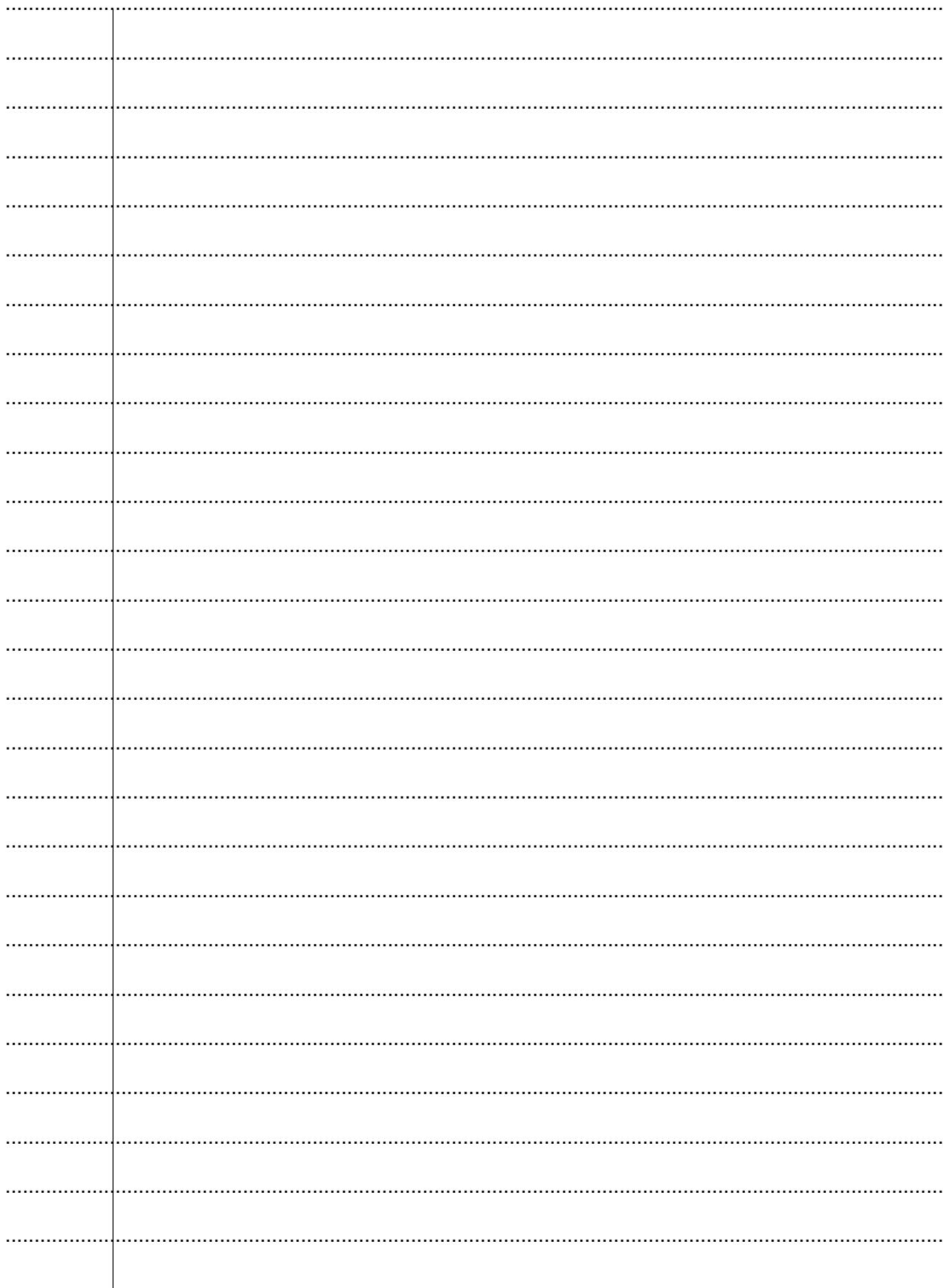
[6]

**END OF QUESTION PAPER**

10

**ADDITIONAL ANSWER SPACE**

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).



The image shows a set of horizontal dotted lines for handwriting practice. A vertical solid line is positioned on the left side, creating a margin. The rest of the page is filled with 22 rows of dotted lines, each consisting of a top dashed line, a middle dotted line, and a bottom dashed line, intended for writing practice.



Oxford Cambridge and RSA

## Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website ([www.ocr.org.uk](http://www.ocr.org.uk)) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.