

OCR

Oxford Cambridge and RSA

Tuesday 21 June 2016 – Morning**GCSE MANUFACTURING****B232/02** Manufacturing Processes

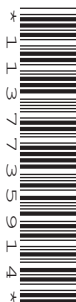
Candidates answer on the Question Paper.

OCR supplied materials:

None

Other materials required:

None

Duration: 1 hour

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.

2

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
Food and drink	
Furniture	
Electrical	
Chemical and pharmaceutical	

[4]

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

1

2

[2]

3

- 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]

4

- 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

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[illegible]

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