



Oxford Cambridge and RSA

**Tuesday 16 June 2015 – 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	
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Centre number						Candidate number			
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**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. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- 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.

Answer **all** the questions.

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
Electronic and communications	
Packaging	
Machinery and equipment	
Motor manufacturing	
Furniture	

[5]

(b) Name **one** manufacturing sector not listed above.

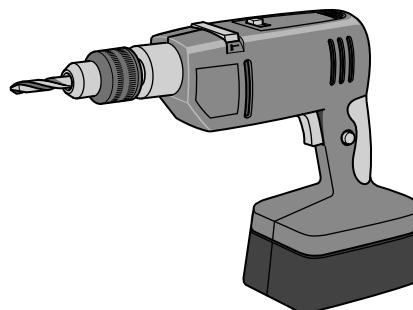
Give **two** examples of products made in that sector.

Sector ..... [1]

Product 1 ..... [1]

Product 2 ..... [1]

2 The picture below shows a portable electric drill.



(a) Name the manufacturing process used to make the drill casing.

..... [1]

(b) Explain how modern technologies might be used to monitor and control the manufacture of the drill casing.

.....  
.....  
.....  
..... [3]

(c) State **two** different quality checks carried out during the making of the product.

1 ..... [1]

2 ..... [1]

(d) Describe **two** safety precautions that should be taken when making the product.

1 .....  
..... [1]

2 .....  
..... [1]

3 Prototypes are often used by manufacturing companies.

(a) Give **three** reasons why a manufacturer would make a prototype of their final product.

Reason 1 ..... [2]

Reason 2 ..... [2]

Reason 3 ..... [2]

(b) Explain why a prototype is often made from different materials to those used in the final product.

.....  
.....  
.....  
..... [3]

4 The manufacture of a new product is carried out in a number of stages.

(a) Complete the box below by adding the following manufacturing stages in the correct order.

**Despatch**

**Processing and production**

**Final quality check**

**Material supply and control**

Manufacturing stages
<b>Production planning</b>
<b>Assembly</b>
<b>Packaging</b>

[4]

(b) Describe how modern technology could be used in the following stages of manufacturing.

(i) Production planning .....

..... [2]

(ii) Assembly .....

..... [2]

5 A list of modern materials and ingredients commonly used in manufacturing products is shown below.

Titanium	Kevlar	ABS
Liquid crystal	Pro-biotics	GRP

(a) Give **three** different examples of products that can be made using materials or ingredients chosen from the list above.

Product 1 ..... [1]

Product 2 ..... [1]

Product 3 ..... [1]

(b) Some modern materials are referred to as 'smart materials'.

(i) Describe what is needed for a material to be called 'smart'.

.....  
..... [2]

(ii) Describe **one** use of a smart material in a manufactured product.

.....  
.....  
..... [2]

6 Materials and ingredients may be supplied to a manufacturer in a number of forms such as those shown below.

<b>Solid</b>	<b>Sheet</b>	<b>Liquid</b>
<b>Granular</b>	<b>Powder</b>	

(a) (i) Give **two** examples of materials or ingredients that are supplied in sheet form.

Material/Ingredient 1 ..... [1]

Material/Ingredient 2 ..... [1]

(ii) Give **two** examples of materials or ingredients that are supplied in powder form.

Material/Ingredient 1 ..... [1]

Material/Ingredient 2 ..... [1]

(b) Describe **two** factors that should be considered when deciding what form a material or ingredient should be supplied in.

Factor 1 .....  
.....  
..... [2]

Factor 2 .....  
.....  
..... [2]

7 Explain how the following factors could affect the quality of a finished product.

(i) Materials used .....

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

[3]

(ii) Process used .....

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

[3]

**8\*** Discuss the benefits to the workforce of using modern technologies in manufacturing.

[6]

**END OF QUESTION PAPER**

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