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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					
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. 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.

2

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.

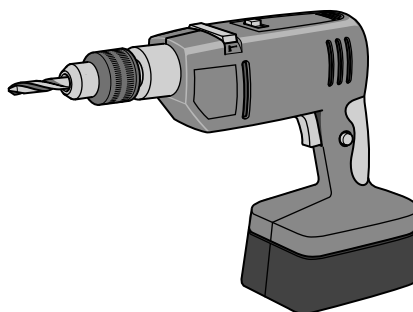
Sector [1]

Product 1 [1]

Product 2 [1]

3

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]

..... [1]

2 [1]

..... [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]

5

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
Production planning
Assembly
Packaging

[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.

Solid	Sheet	Liquid
Granular	Powder	

- (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.

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..... [6]

END OF QUESTION PAPER

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