

**Wednesday 19 June 2013 – 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 **8** pages. Any blank pages are indicated.

1 Manufacturing sectors produce different products.

(a) Complete the links below to identify which manufacturing sector makes the products listed.

Manufacturing Sector	Product
Packaging	Crane
Machinery and equipment	Toaster
Paper and print	Egg box
Clothing and textiles	Mobile phone
Electronic and communications	Magazine
Electrical	Swimming costume

[6]

(b) Select **one** manufacturing sector given above and describe the use of **one** computer-controlled machine used in that sector.

Sector .....

Description of use .....

.....

.....

..... [2]

2 The production of a new product is carried out in a number of stages.

(a) State **two** activities carried out in the **design** stage.

1 .....

2 ..... [2]

(b) State **two** activities carried out in the **manufacturing** stage.

1 .....

2 ..... [2]

(c) Describe how 'modern technologies' could be used in the following production stages.

(i) Quality control

.....

.....

..... [2]

(ii) Dispatch

.....

.....

..... [2]

3 Manufacturing sectors use different tools and equipment to produce prototypes.

(a) (i) Describe **two** processes with which you are familiar used to make a prototype.

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

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

(ii) Describe **one** safety precaution taken when making the prototype.

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

(b) Explain why a manufacturer would use quality control procedures.

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

4 Many factors need to be considered when selecting materials for use in manufactured products.

The table below shows a comparison of six materials.

Material	Factors				
	Ease Of Storage	Ease Of Use	Safe To Work With	Value For Money	Readily Available
<b>A</b>	2	6	7	8	9
<b>B</b>	5	6	7	5	4
<b>C</b>	8	2	2	2	3
<b>D</b>	1	9	2	2	2
<b>E</b>	3	8	8	3	5
<b>F</b>	9	5	3	8	4

10 = excellent 1 = very poor

(a) State which material is the safest to work with.

Material ..... [1]

(b) Explain why material **D** might be unsuitable for making large batches of products at regular intervals.

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

(c) Plastics materials are used widely in manufactured products.

Give **three** properties of plastics materials that make them suitable for manufactured products.

1 .....  
 2 .....  
 3 ..... [3]

5 Manufacturers often use 'bought-in' standard components in their products.

(a) Give **two** examples of 'bought-in' standard components.

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

(b) Explain **two** benefits to a manufacturer, other than cost, of using "bought-in" standard components.

- 1 ..... [3]
- 2 ..... [3]

6 (a) Describe how modern materials and technologies are used in a product you have studied.

- Product .....
- Modern material ..... [2]
- Modern technology ..... [2]

(b) Give **two** benefits to a manufacturer of using modern production methods.

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

7 Control systems include inputs, outputs and feedback.

(a) (i) Give **one** example of an input device used in a control system.

..... [1]

(ii) Give **one** example of an output device used in a control system.

..... [1]

(b) Describe the use of a control system in **one** of the following stages of manufacture.

- Quality control
- Assembly
- Packaging

Stage of manufacture .....

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

(c) Explain how a control system might be used to improve the working conditions in a manufacturing company.

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

