OCR
RECOGNISING ACHIEVEMENT

Friday 22 June 2012 – Morning

GCSE MANUFACTURING

B232/02 Manufacturing Processes

B22690061 2

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
None

Duration: 1 hour

B 2 3 2 0 2

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 questions 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
Chemical and pharmaceutical	Laminated windscreen
Electronic and communications	Webcam
Food and drink	Bleach
Packaging	Child's book
Motor manufacture	Coffee jar
Paper and print	Energy bar

[6]

(b) State **two** manufacturing sectors not shown above and give **one** example of a product made in that sector.

Sector 1 ..... **[1]**

Product ..... **[1]**

Sector 2 ..... **[1]**

Product ..... **[1]**

2 **(a)** Complete the table below by adding the following manufacturing stages in the correct order.

Packaging

Production planning

Processing and production

Manufacturing stage
Material supply and control
Assembly
Final quality check
Dispatch

[3]

(b) **(i)** Give **two** factors that should be considered when selecting materials for a product.

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

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

(ii) Describe, using **one** example, the benefits of using 'smart' materials in a product.

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

3 Many factors need to be considered when choosing production methods for manufactured products.

(a) Give **two** factors that should be considered and explain why each factor is important.

(i) Factor 1 ..... **[1]**

Importance .....

.....

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

(ii) Factor 2 ..... **[1]**

Importance .....

.....

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

4 **(a)** Explain why a manufacturer would make a prototype before production.

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

(b) Describe **one** process that could be used to make a prototype.

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

5 **(a)** Give **two** reasons why companies use control systems to monitor manufacturing processes.

1 .....

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

2 .....

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

(b) Name **one** input device used in a basic control system.

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

(c) **(i)** Name **one** output device used in a control system.

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

(ii) Give **one** example of its use in manufacturing.

.....

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

(d) Explain how the use of feedback from a control system may be used to improve quality.

.....

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

6 A manufacturing company is considering the purchase of a CAD/CAM (computer aided design/ computer aided manufacturing) system for its design work.

(a) Give **three** benefits of using CAD when producing designs.

Benefit 1 .....

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

Benefit 2 .....

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

Benefit 3 .....

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

(b) Describe **two** issues that a company should consider before buying a new CAD/CAM system.

Issue 1 .....

.....

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

Issue 2 .....

.....

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

7 Explain, using examples, how the following **three** factors could affect the quality of the finished product.

Use a different example for each factor.

(i) Materials used .....

.....

.....

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

(ii) Processes used .....

.....

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

(iii) Batch size .....

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

8* Discuss the health and safety implications for a manufacturer when introducing modern technologies.

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..... **[6]**