

Candidate forename						Candidate surname					
Centre number						Candidate number					

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GCSE
B232/02
MANUFACTURING
Manufacturing Processes

FRIDAY 22 JUNE 2012: Morning
DURATION: 1 hour
plus your additional time allowance
MODIFIED ENLARGED

Candidates answer on the Question Paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

None

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

- **Write your name, centre number and candidate number in the boxes on the first page. 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).**

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 (*).**

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.

_____ **[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.**

[3]

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

[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.

_____ [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 _____

_____ **[3]**

(iii) Batch size _____

_____ **[3]**

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

[6]

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.