

Monday 27 June 2016 – Afternoon

GCSE MANUFACTURING

B234/02 Impact of Modern Technologies on Manufacturing

Candidates answer on the Question Paper.

OCR supplied materials:

None

Other materials required:

None

Duration: 1 hour



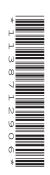
Centre number Candidate nu	umber	

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 A list of manufacturing sectors is given below.

Food and drink
Electrical
Furniture
Machinery and Equipment
Paper and Print

(a)	Name two different manufacturing sectors other than those shown above.	
	1	
	2	 [2]
(b)	Choose three sectors from the list and, for each sector:	
	 name one product produced in that sector give one example of a modern technology used in the product. 	
	Sector 1	
	Product	
	Modern technology used	 [2]
	Sector 2	
	Product	
	Modern technology used	
		[2]
	Sector 3	
	Product	
	Modern technology used	 [2]

2

3	Des	scribe the impact of modern technologies on the following:	
	(i)	Product quality	
			[2]
	(ii)	Materials	
			[2]
	(iii)	The environment	
			[2]
	(iv)	Product disposal	
			[2]

'Lea	an manufacturing' aims to reduce waste.
(a)	Describe in detail two ways in which waste can be reduced in the manufacturing process.
	1
	[3]
	2
	[3]
(b)	Explain one possible impact on the environment of waste material disposal.
	[3]

5 Part of a flow process chart is shown below.

Flow Process Char	F	ow	Process	Chart
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Subject: Process and production

Chart begins: Source material

Chart ends: Move finished product to dispatch

Symbols	Description	Distance (m)	Time (s)
0	Source material	20	40
0	Place material in milling machine		10
0	Process component		300
\uparrow	Move machined component to assembly	10	20
0	Assemble component		100
\Rightarrow	Move assembled product to quality control	20	80
∇	Check final product		25
\Rightarrow	Move finished product to dispatch	50	100

(a)	State the meaning	g of each of the following flow process symbols:	
	Symbol 1 O		. [1
	<i>y</i>		
	Symbol 3 ∇		. [1
(b)	Explain how this fl	low process chart could be used to improve manufacturing output.	
			ΓO

	(c)	Describe how introducing a quality control check after processing the component reduce:	could
		Manufacturing waste	
		Manufacturing time	
			[2]
6	(a)	Describe two ways in which energy consumption in the workplace can be reduced.	
		1	
		2	
	(b)	Give three examples of 'green energy' sources.	
		1	
		2	
		3	[3]

7	Describe two ways in which the use of modern technology has improved the workple environment.	ace
	1	
		[2]
	2	
		[2]
8*	Discuss the effects of modern technologies on 'Global Trading'.	
		•••••
		[6]

END OF QUESTION PAPER



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