

71
Candidate Num

# General Certificate of Secondary Education January 2012

## **Engineering**

Paper 2

Assessment Unit 3

assessing

**Engineering Technology** 

[GEE32]





TIME

1 hour.

#### **INSTRUCTIONS TO CANDIDATES**

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper. Answer **all** parts of the **one** question in this paper.

The paper should be answered in relation to the Pre-Release Material. You will be provided with a new copy of the Pre-Release Material. You should **not** bring any of the material previously issued, or any notes made into this examination.

### **INFORMATION FOR CANDIDATES**

The total mark for this paper is 40.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each part question.

Quality of written communication will be assessed in (h) and (i).

For Examiner's use only				
Question Number 1	Marks			
(a)				
(b)				
(c)				
(d)				
(e)				
(f)				
(g)				
(h)				
(i)				

	<u> </u>
Total	
Marks	



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Answer all parts of the question	Answer	all	parts	of the	question
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Examiner Only			
Marks	Remark		

	make the frame of an ironing board.	
		[2]
(i	Explain how tubular steel has helped to improve the characteristics of an ironing board.	
		[2]
	odern technology is used extensively in the manufacture of ironing pards.	
	ve <b>one</b> example of how modern technology has enhanced the anufacture of ironing boards.	
_		_
_		[2]
u	ne ironing board shown in the pre-release material is assembled ing a number of fittings. Give <b>one</b> example of a mechanical fitting and where it has been used in the construction of an ironing board.	
F	tting	[4]
_	here it has been used	[1]
V		

(d)		te <b>two</b> computerised production processes used in the nufacture of an ironing board.		Examin Marks	er Only Remark
	Pro	ocess 1			
			 [1]		
	Pro	ocess 2			
			 [1]		
(e)	(i)	Give <b>two</b> examples of how CAM has helped control the manufacturing costs of an ironing board.			
		Example 1			
			[2]		
		Example 2			
			[2]		
	(ii)	How has CAM made ironing boards more reliable for the customer?			
			[2]		
(f)		re <b>one</b> advantage of using CAD at the design stage of the iroard for the manufacturer.	ning		
			 [2]		
			[-]		

manufacture of iro	ning boards.			Marks	R
Describe giving <b>or</b> production stage.	ne example how com	puter control is us	ed during the		
			[2]		

known as injection moulding.	Examin Marks	er Only Remark
In the box below using annotated sketches and the correct terminology explain this process.		
<ul> <li>Marks will be awarded for</li> <li>Detail contained in sketches [4]</li> <li>Quality of sketches [3]</li> <li>Detailed notes [3]</li> </ul>		
[10]		

(i)	In the box below using notes and sketches explain how the	-4	Examin Marks	er Only Remark
	mechanism which allows the user to iron at different heights oper	ates.	Walks	Remark
	Marks will be awarded for			
	<ul><li>Suitability of chosen method [4]</li><li>Quality of sketches [3]</li></ul>			
	<ul><li>Quality of sketches [3]</li><li>Detailed notes [3]</li></ul>			
		[10]		
_		_		
	THIS IS THE END OF THE QUESTION PAPER			
_		_		



#### General Certificate of Secondary Education January 2012

## **Engineering**

PRE-RELEASE MATERIAL

Paper 2
Assessment Unit 3

assessing

**Engineering Technology** 

[GEE32]

**TUESDAY 31 JANUARY, AFTERNOON** 



You must use **this** clean copy of the pre-release material in the examination and **not** your own annotated copy.



#### **Engineering Technology Pre-Release Material**

The image below shows an ironing board.



© Getty Images / Zedcor Wholly Owned / PhotoObjects.net / Thinkstock

#### **Description**

An ironing board such as the one shown above is generally a large, flat piece of metal that is covered with a heat safe padding on which clothing may be ironed safely. The standard board has two primary parts which include:

- a bed for ironing
- collapsible legs that are hinged or slip into the board for easy storage

The legs are generally tubular with padded feet so that they do not damage floors. No matter what the configuration, every ironing board made of metal must have a pad and cover so that the metal bed of the ironing board does not become too hot from the iron. Most ironing boards are sold with a foam pad and decorative cover.

#### Features include:

- Adjustable height
- Folds away
- 4 anti slip PVC feet
- 122 × 43 cm ironing surface
- Frame material steel