

General Certificate of Secondary Education January 2014

## Engineering

Paper 2

# Assessment Unit 3

assessing Engineering Technology

[GEE32]

WEDNESDAY 15 JANUARY, AFTERNOON



## 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.

indicate the marks awarded to each question or part question.

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

## INFORMATION FOR CANDIDATES

The total mark for this paper is 40. Figures in brackets printed down the right-hand side of pages

8835

use onlyQuestion<br/>NumberMarks(a)(a)(b)(b)(c)(c)(d)(c)(d)(c)(f)(c)(g)(c)(h)(c)(i)(c)Total<br/>Marks(c)

For Examiner's

**Centre Number** 

**Candidate Number** 

71

Answer all parts of the question

	Answer <b>all</b> parts of the question.		er Only
(a)	The Taylor Continental 1100 bin is assembled using four separate side panels and a base. Outline <b>one</b> reason why the bin is not manufactured in one piece.	Marks	Remar
	[2]		
(b)	The assembly process involved in the production of the bin includes the use of modern technology such as robotic welders to tack weld the different pieces of the bin together. Explain <b>two</b> advantages of using modern technology such as this in the fabrication of a Taylor Continental 1100 bin.		
	1[2]		
	2 [2]		
(c)	List <b>two</b> parts of the Taylor Continental 1100 bin that have been folded before being assembled into position.		
	1 [1]		
	2 [1]		
(d)	The main structure of the Taylor Continental 1100 bin is manufactured from steel. Outline <b>one</b> reason why this is an appropriate material.		
	[2]		

(e)	(i)	Name the plastic used to manufacture the lid of the Taylor Continental 1100 bin.		Examine Marks	r Only Remark
	(ii)	Identify <b>one</b> reason why this is an appropriate material to make the lid of the Taylor Continental 1100 bin.	[1]		
(f)	-	/lor Continental 1100 bins are galvanised to stop corrosion. Expla			
			[2]		
(g)		ntrol systems are used in the manufacture of mass produced Tay ntinental 1100 bins. State <b>one</b> stage in the manufacture of Taylor Continental 1100	/lor		
	(-)	bins, where quality should be checked.	[1]		
	(ii)	Describe how the quality would be checked at this stage.			
	(iii)	Outline <b>one</b> benefit of quality control techniques during the	[2]		
		manufacturing process of a Taylor Continental 1100 bin for the user.			
			[2]		

(h) In the box below using annotated sketches and the correct terminology show how the four sides of the Taylor Continental 1100 bin are attached and held together.

Marks will be awarded for

- Detail contained in sketches [4]
- Quality of sketches [3]
- Detailed notes [3]

Examiner Only

Marks Remark

 (i) In the box below using annotated sketches and the correct terminology show how a hydraulic press is used to manufacture the sides of the Taylor Continental 1100 bin.

Marks will be awarded for

- Detail contained in sketches [4]
- Quality of sketches [3]
- Detailed notes [3]

[10]

Examiner Only

Marks Remark

## THIS IS THE END OF THE QUESTION PAPER

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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 a Taylor Continental 1100 bin.



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### Description

Built to EN840 standards the award-winning Continental range is established as the industry standard for waste and recycling containers. This workhorse of the waste industry offers unrivalled size and capacity options, from 500 litres to 1280 litres. The body of the bin ensures robust protection in the harshest of environments, and protects the container from internal corrosion due to residual waste being caught in exposed corners.

#### Features include:

- Swivel castors.
- Available in different sizes.
- Welded seams.
- Sump base for improved rigidity and stability with drain plug as standard.
- Comb lifting bar.