

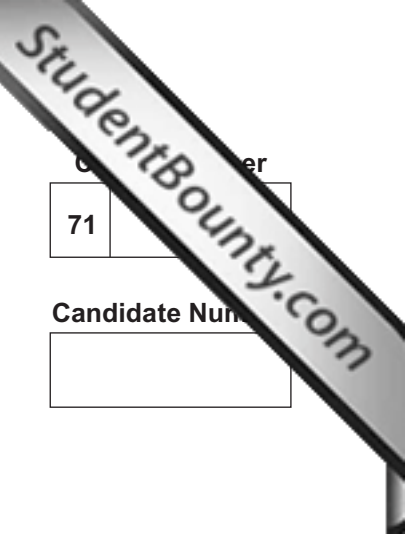


Rewarding Learning

General Certificate of Secondary Education  
2011

**Engineering**  
Paper 2  
Assessment Unit 3  
*assessing*  
Engineering Technology  
[GEE32]

FRIDAY 20 MAY, MORNING



71	
Candidate Number	
<input type="text"/>	

**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 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 in to 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 question or part question.  
 Quality of written communication is assessed in **j** and **k**.

For Examiner's use only	
Question Number 1	Marks
a	
b	
c	
d	
e	
f	
g	
h	
i	
j	
k	
<b>Total Marks</b>	







(h) The handles of the hand trolley are manufactured by a process called **injection moulding**.

Explain why this is an appropriate manufacturing process to manufacture the handles.

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[2]

(i) Give **one** example why the development of new technologies is important for the manufacture of hand trolleys.

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[2]

Examiner Only	
Marks	Remark

- (j) The steel frame of the hand trolley is manufactured by a process known as **extrusion**.

In the box below using annotated sketches and the correct terminology explain this process.

Marks will be awarded for

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



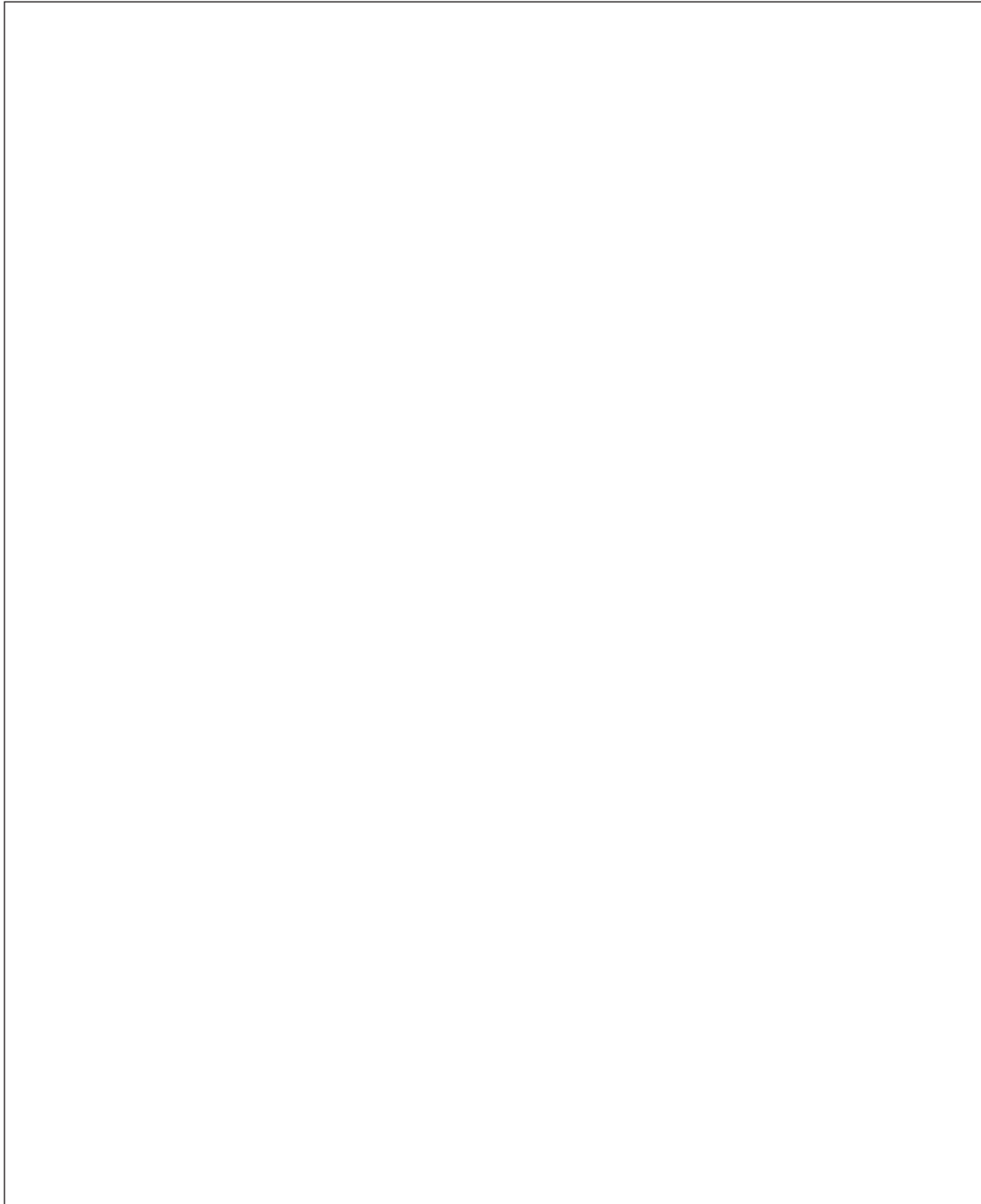
[10]

Examiner Only	
Marks	Remark

(k) Using annotation and sketches explain how the galvanised wheel rims are manufactured and assembled together.

Marks will be awarded for

- Suitability of sketches [4]
- Quality of sketches [3]
- Detailed notes [3]



[10]

Examiner Only	
Marks	Remark

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**THIS IS THE END OF THE QUESTION PAPER**

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## Engineering

PRE-RELEASE MATERIAL

Paper 2

Assessment Unit 3

*assessing*

Engineering Technology

[GEE32]

FRIDAY 20 MAY, MORNING

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



6607.03

## Engineering Technology Pre-Release Material

The image below shows a “Hand Trolley”.



### Description

A hand trolley such as the one shown above is an L-shaped box moving handcart. It has handles at one end, wheels at the base with a ledge to set objects on, which is flat against the floor when the trolley is upright. The objects to be moved are tilted forward, the ledge is inserted underneath them, and the objects are allowed to tilt back and rest on the ledge. The trolley and objects are then tilted backward until the weight is balanced over the large wheels, making otherwise heavy and large objects easier to move. It is an example of a first class lever.

Features include:

- Frame material – steel
- Finish – Powder coating
- Pressed steel galvanised rims
- Injection moulded hand grips (PE)

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