



*Rewarding Learning*

General Certificate of Secondary Education

2024

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# Engineering and Manufacturing

Unit 2

*assessing*

Production

**[GEM21]**

**TUESDAY 7 MAY, MORNING**

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## TIME

3 hours.

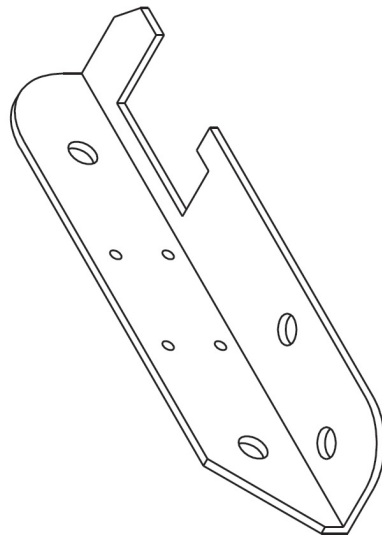
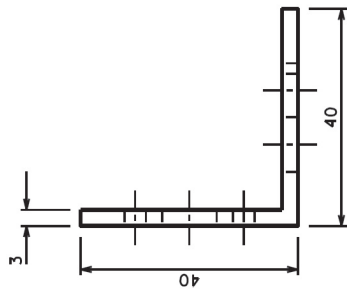
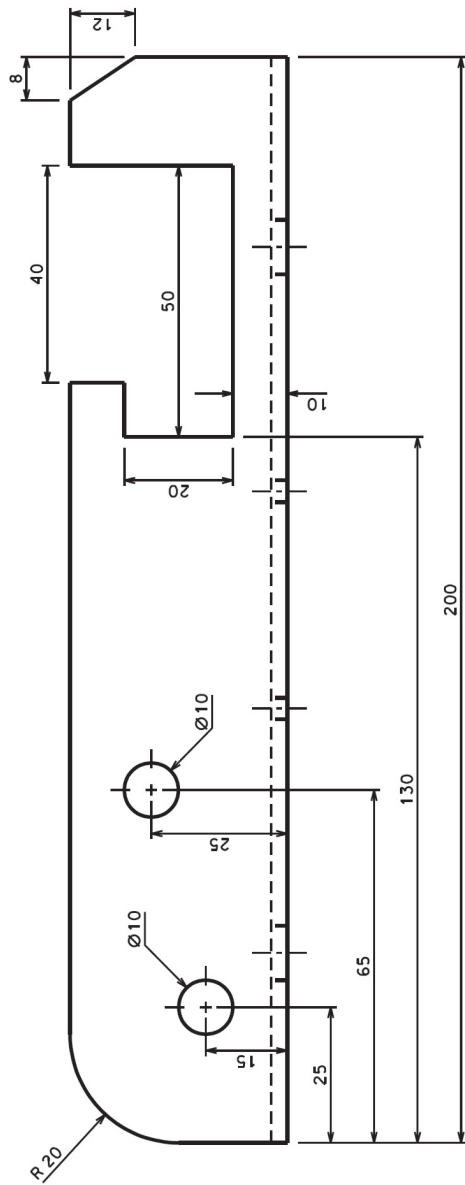
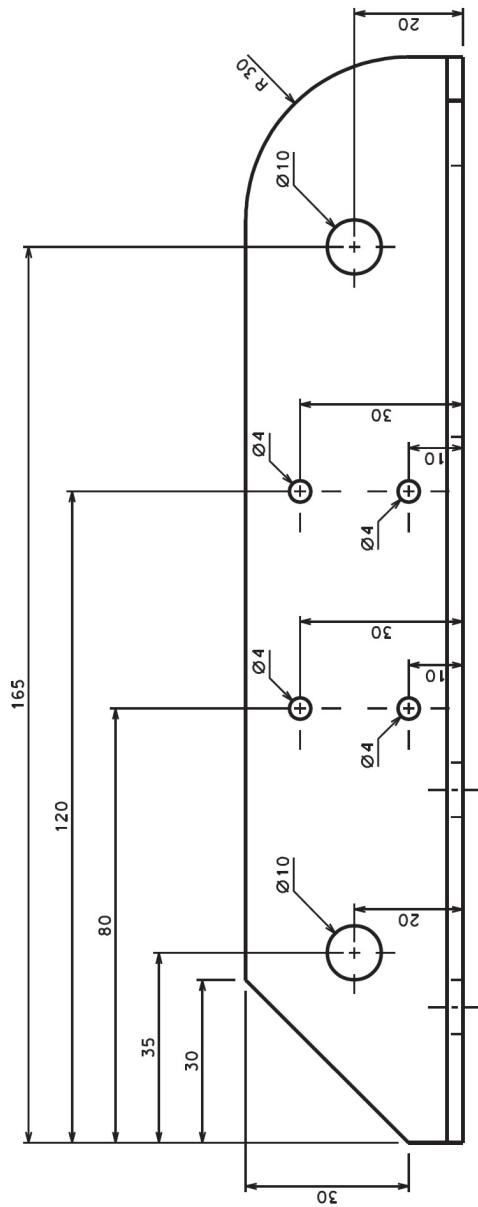
## INSTRUCTIONS TO CANDIDATES

Candidates are expected to complete **all** parts of the manufacturing task from the drawings supplied using the equipment and the materials provided by the centre.



Candidates are advised to spend the first 10 minutes reading the drawings.  
Candidates must apply Health and Safety procedures at all times.

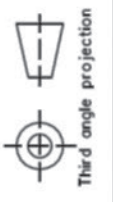
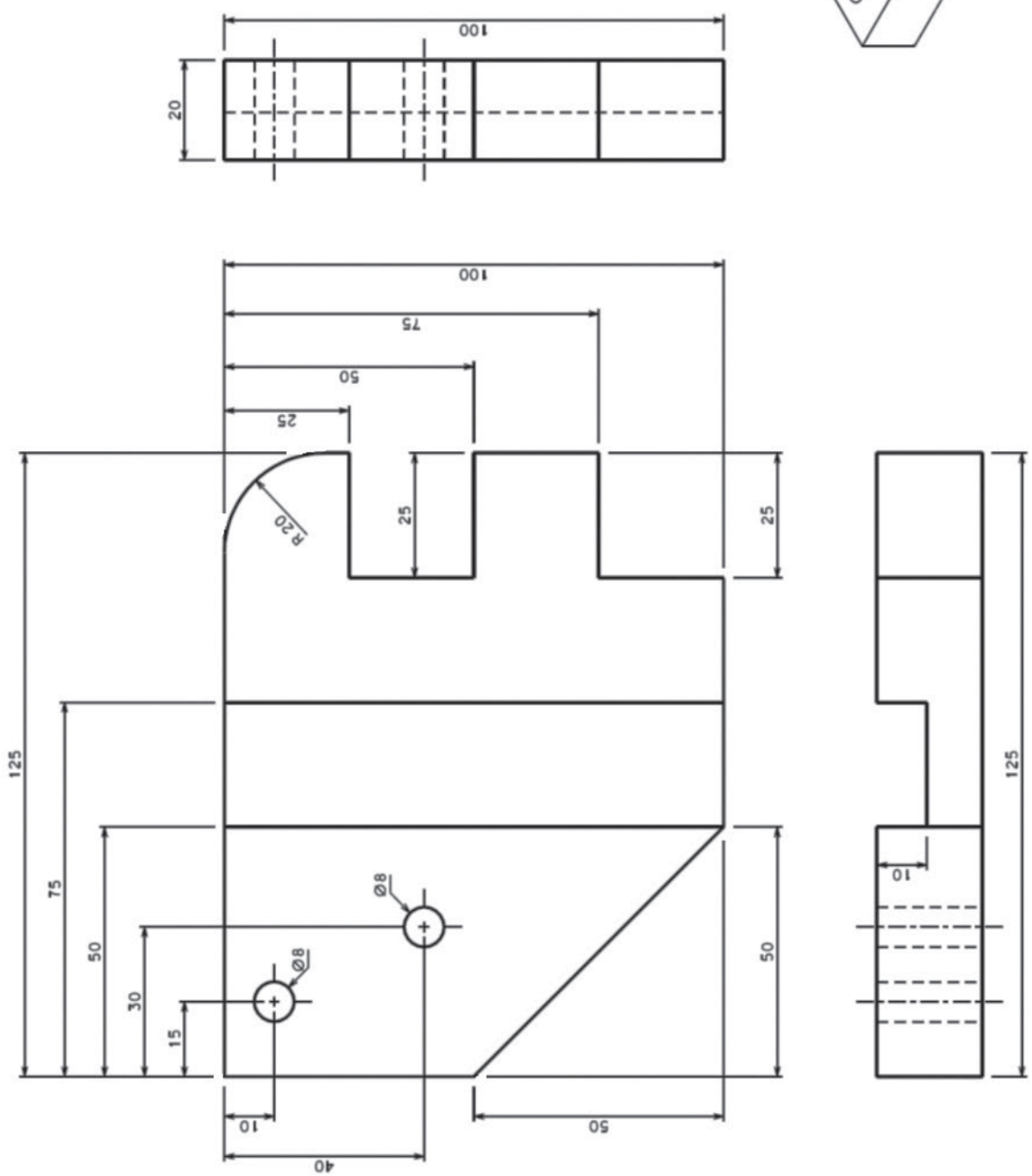
## INFORMATION FOR CANDIDATES

The total mark for this practical examination is **100**.



Notes  
 All parts cleaned  
 Draw filled finish  
 No sharp edges

CCEA GCSE Engineering and Manufacturing	Dimensions in mm Do not scale	Unit 2	Part 1	 Third angle projection  Material 40mm x 40mm x 3mm mild steel angle section
	Tolerance +/- 0.5mm			



Third angle projection

CCEA GCSE Engineering and Manufacturing	Dimensions in mm Do not scale Tolerance +/- 0.5mm	Unit 2	Part 2
		Material 20mm thick wood	

Notes  
Finished with glass paper

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DATE OF ISSUE: JANUARY 2024

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**CONFIDENTIAL INSTRUCTIONS  
TO TEACHERS**

**MANUFACTURING PROCESSES**

## **Manufacturing Processes**

The practical examination set for Summer **2024** will require candidates to employ manufacturing processes in both **metal** and **wood**.

The practical examination set for Summer **2024** will require candidates to engage in the following processes:

- Working to given tolerances
- Marking out
- Cutting
- Cross filing and draw filing
- Centre punching
- Drilling
- Using wood chisels
- Finishing



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## **Engineering and Manufacturing**

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# **CONFIDENTIAL INSTRUCTIONS TO TEACHERS**

# **EQUIPMENT AND MATERIALS LIST**





**Centres must ensure that the materials are ordered well in advance of the practical examination.**

## **Confidentiality**

To maintain the integrity of the assessment, **no** information pertaining to this examination should be publicly released until after the examination is completed.

Information about the equipment and materials required for the Unit 2 assessment **must not** be communicated to candidates taking the examination prior to the examination.

## **Equipment and Materials**

It is the responsibility of the centre to ensure candidates have access to all of the equipment and materials required to complete the practical examination.

To complete the practical examination successfully each candidate will need access to the following equipment and materials.

### **Equipment:**

- Access to a multimedia workshop capable of accommodating the required number of candidates
- Appropriate Health and Safety equipment for each candidate
- Coping saw
- Tenon saw or dovetail saw
- Try square
- Marking gauge
- Wood chisels
- Mallet
- Hacksaw
- Junior hacksaw
- Pillar drill
- Drill bits suitable for metal: 4 mm and 10 mm and for wood: 8 mm
- Scriber
- Engineers square
- Marking blue
- Centre punch
- Hammer
- Steel rule
- Spring divider
- Odd-leg caliper
- Files suitable for cross and draw filing
- Abrasives suitable for finishing wood and metal

### **Material required for each candidate:**

- 1 piece of 40 mm × 40 mm × 3 mm mild steel angle section 210 mm long and
- 1 piece of 20 mm (+/- 1 mm) natural wood\* 125 mm × 100 mm

\* The natural wood selected by the centre should be suitable for completion of a bench joinery piece to a high degree of accuracy and finish.

