



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle 2023

Marking Scheme

Wood Technology

Common Level

Note to teachers and students on the use of published marking schemes

Marking schemes published by the State Examinations Commission are not intended to be standalone documents. They are an essential resource for examiners who receive training in the correct interpretation and application of the scheme. This training involves, among other things, marking samples of student work and discussing the marks awarded, so as to clarify the correct application of the scheme. The work of examiners is subsequently monitored by Advising Examiners to ensure consistent and accurate application of the marking scheme. This process is overseen by the Chief Examiner, usually assisted by a Chief Advising Examiner. The Chief Examiner is the final authority regarding whether or not the marking scheme has been correctly applied to any piece of candidate work.

Marking schemes are working documents. While a draft marking scheme is prepared in advance of the examination, the scheme is not finalised until examiners have applied it to candidates' work and the feedback from all examiners has been collated and considered in light of the full range of responses of candidates, the overall level of difficulty of the examination and the need to maintain consistency in standards from year to year. This published document contains the finalised scheme, as it was applied to all candidates' work.

In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with their Advising Examiners when in doubt.

Future Marking Schemes

Assumptions about future marking schemes on the basis of past schemes should be avoided. While the underlying assessment principles remain the same, the details of the marking of a particular type of question may change in the context of the contribution of that question to the overall examination in a given year. The Chief Examiner in any given year has the responsibility to determine how best to ensure the fair and accurate assessment of candidates' work and to ensure consistency in the standard of the assessment from year to year. Accordingly, aspects of the structure, detail and application of the marking scheme for a particular examination are subject to change from one year to the next without notice.

Annotations to be used in Wood Technology for 2023

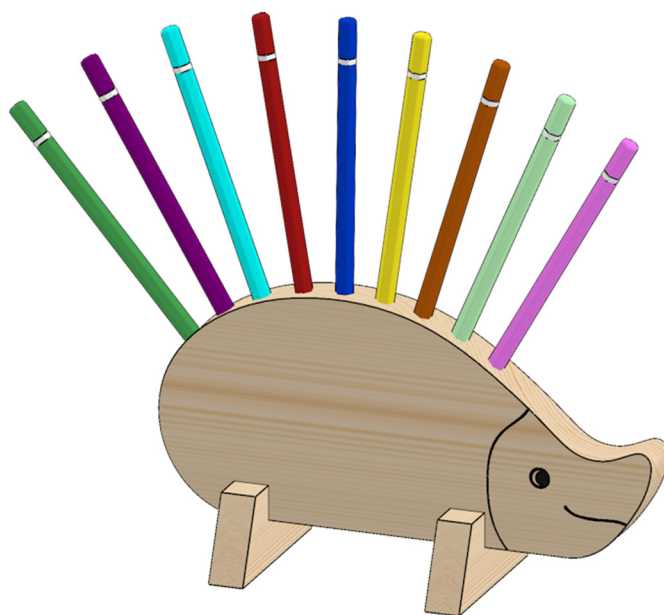
The table below contains information on annotations used for marking the examination paper.

Annotation	Use	Marks (if applicable)
✓ ₁	Valid information	1
✓ ₂	Valid information	2
✓ ₃	Valid information	3
✓ ₄	Valid information	4
✓ ₅	Valid information	5
✓ ₆	Valid information	6
✓ ₇	Valid information	7
✓ ₈	Valid information	8
✓	Relevant information	N/A
0	Incorrect answer	0
⚡	Page seen by examiner/ information not valid	N/A



Junior Certificate Examination 2023

Wood Technology
Common Level
Marking Scheme

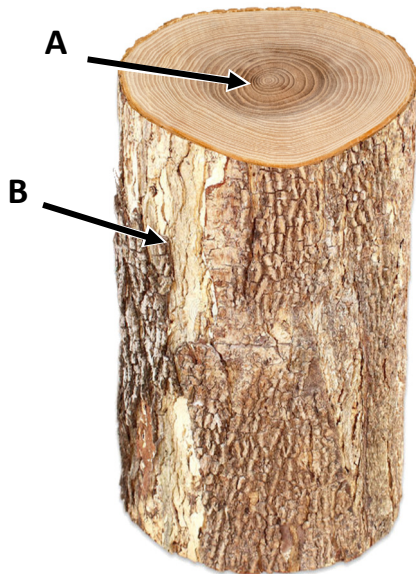
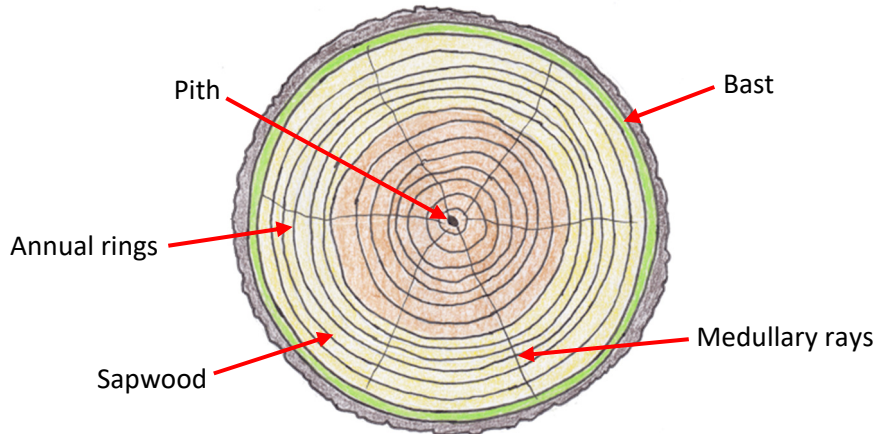


*The Sample solutions shown are presented as example answers.
All other valid solutions are acceptable and are marked accordingly.*

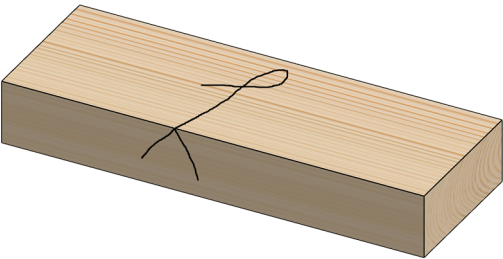
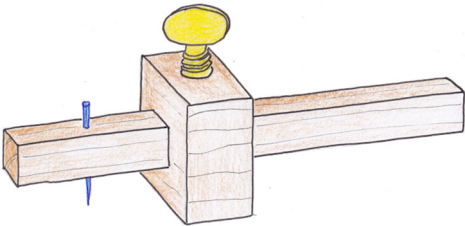
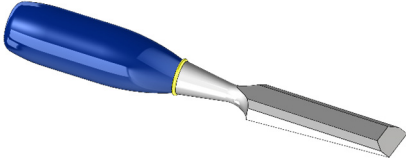
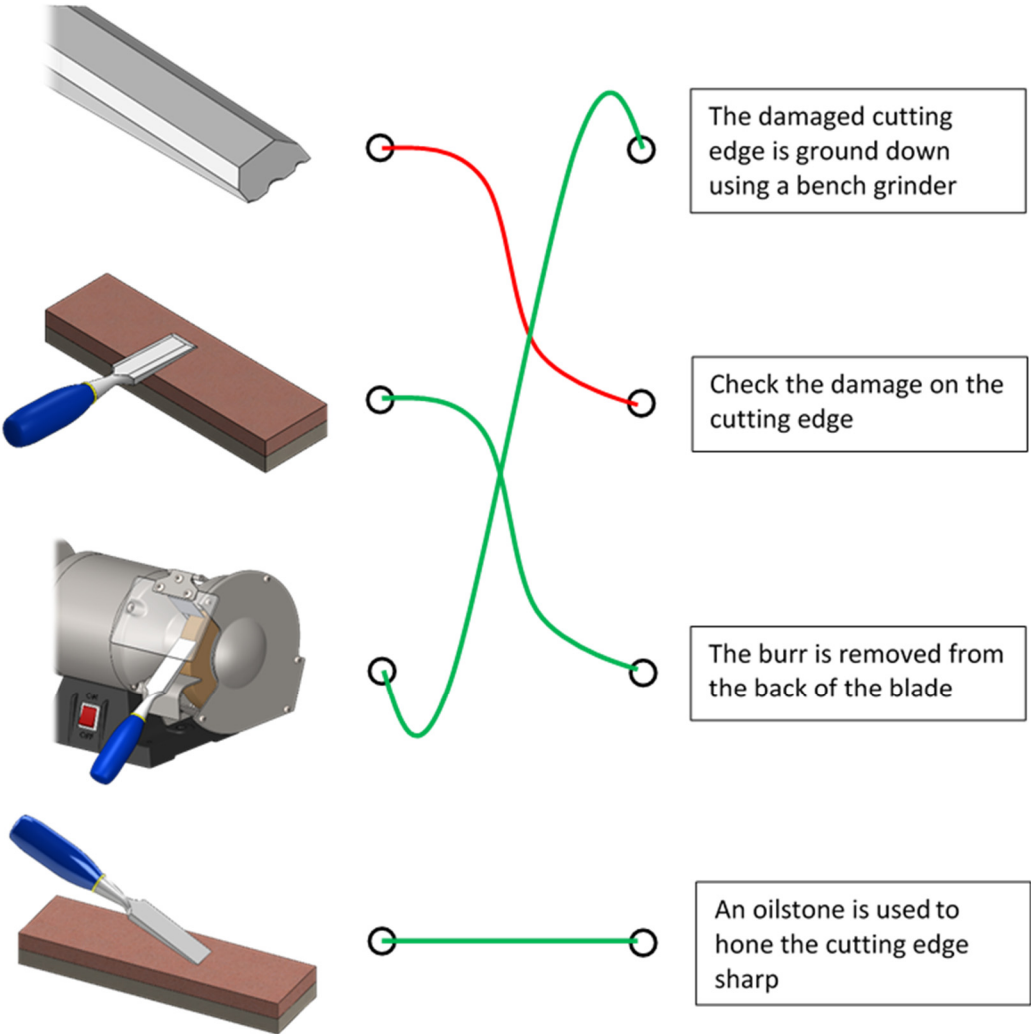
Answer all questions.

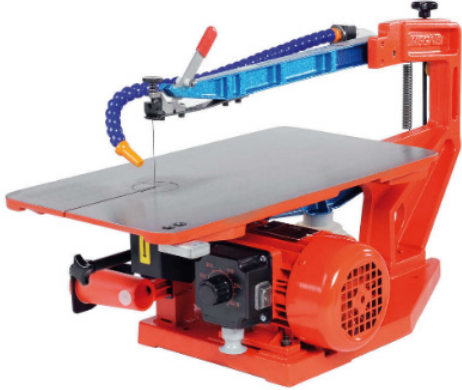
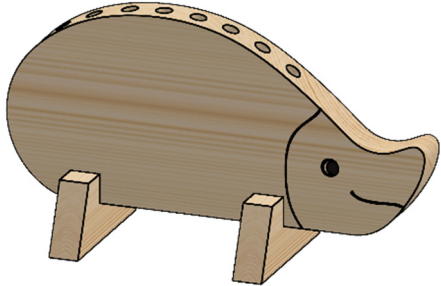
Question 1

Q.	ANSWER	IMAGE(S)	MARKS
(a)	(i) Two reasons for planting native Irish trees. • Give character to our rural and urban areas • Reduced carbon footprint • Provide a habitat for native Irish wildlife and plants • Better suited to our climate • Tackle the climate crisis		(2 + 2) 4 marks
	(ii) Identify the tree leaves. A – Scots Pine B – Oak C – Holly		(1 each) 3 marks
(b)	(i) Two benefits of forestry. • Provide a habitat for birds, animals, insects, plants, etc. • Provide leisure/recreational area for people • Produce oxygen and absorb carbon dioxide • Reduce pollution • Reduce flooding in an area • Improve our health and wellbeing		(2 + 2) 4 marks
	(ii) Two characteristics of a coniferous tree • Cone shaped crown • Needle shaped leaves • Long straight trunk with little taper • Branches start down low • Seeds are in pine cones • Evergreen – do not lose their leaves in Autumn/Winter • Shallow root system		(1 + 3) 4 marks (1 + 3) 4 marks

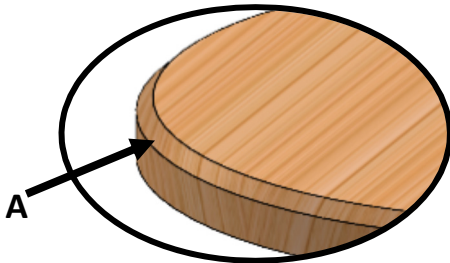
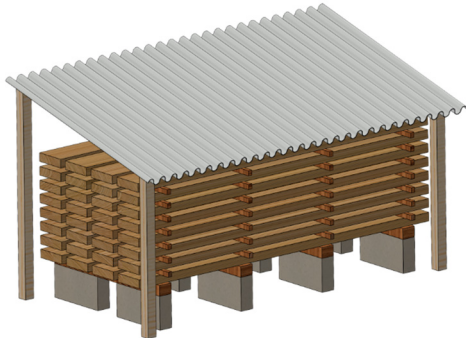
(c)	(i) Name the parts labelled A and B. A – Heartwood B – Bark		(1 + 1) 2 marks
	(ii) State one function of each part. A • Gives the tree strength and stability B • To protect the tree • To prevent evaporation of moisture and minerals from the trunk		(2 + 2) 4 marks
	(iii) Sketch of cross-section and label any two other parts. 	4 marks	
Question 1 Total			29 marks

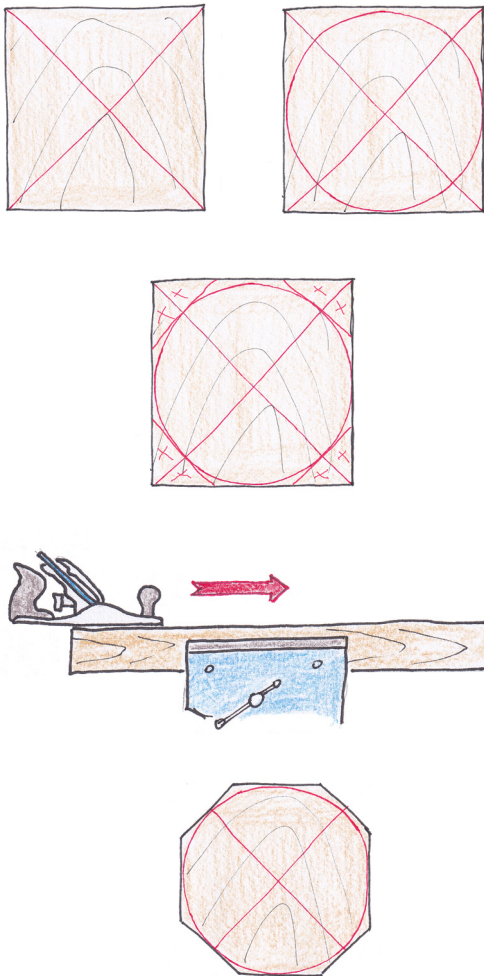
Question 2

Q.	ANSWER	IMAGE(S)	MARKS
(a)	Draw face side and face edge in correct positions.		2 marks
(b)	Name and sketch one marking out tool. Try square, marking gauge, ruler, sliding bevel.....		(1 + 4) 5 marks
(c)	(i) Name the tool shown. Bevel edge chisel		1 mark
	(ii) Match each step.	 The damaged cutting edge is ground down using a bench grinder Check the damage on the cutting edge The burr is removed from the back of the blade An oilstone is used to hone the cutting edge sharp	(1 each) 3 marks

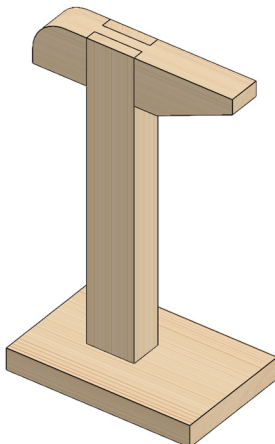
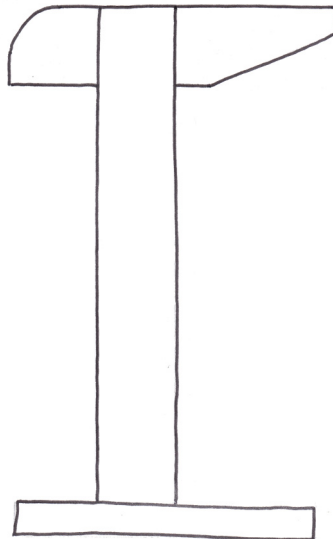
(d)	Name the saws shown and give an advantage of using each... Name: Scrollsaw Advantage: very fine/accurate saw cut, quicker to cut out the shape, saw dust is removed, ...		(1 + 2) 3 marks
	Name: Coping saw Advantage: no electricity required, easy to use, blades are easy to replace, safe (both hands are on handle)...		(1 + 2) 3 marks
(e)	Two reasons why it is necessary to apply a surface finish • To protect the wood • To improve the durability • To enhance the appearance of the stand • Resist moisture • Prevent decay • Easy to clean Any other appropriate reason		(2 + 1) 3 marks
(f)	Design a poster to explain any two of the steps required to apply a clear finish to the pencil stand. • Name of clear finish • Apply the first coat using a suitable cloth/brush/rubber... • Allow finish to dry • Sand lightly between coats (if appropriate) • Apply second and subsequent coats (sanding lightly between coats) Any other appropriate step		8 marks
Question 2 Total			28 marks

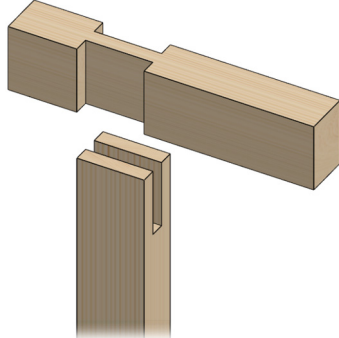
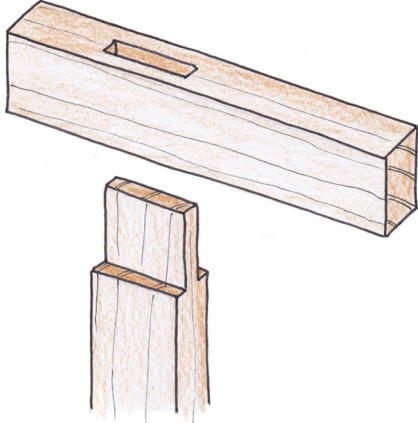
Question 3

Q.	ANSWER	IMAGE(S)	MARKS															
(a)	Indicate the correct name for this moulding and give one reason to add this moulding to the cake stand. Chamfer ☒ Gauge ☐ Reason: - To enhance the appearance - To remove the sharp/square edge		(1 + 1) 2 marks															
(b)	Suitable hardwood and one reason for your choice. Suitable hardwood: Oak, ash, beech, elm, mahogany, walnut, ... Reason: Any suitable reason related to chosen wood.		(1 + 2) 3 marks															
(c)	(i) Name seasoning method shown Natural / air seasoning		2 marks															
	(ii) Two advantages of this method. - Not wasteful of energy - Environmentally friendly - Relatively cheap - No specialist equipment required		(2 + 2) 4 marks															
	(iii) Name one other method of seasoning wood. Kiln seasoning / artificial seasoning		1 marks															
	(iv) Indicate with a tick (✓) ... <table><thead><tr><th>Seasoning</th><th>True</th><th>False</th></tr></thead><tbody><tr><td>Seasoning reduces the moisture content in the wood</td><td>✓</td><td></td></tr><tr><td>Wood is easier to work after seasoning</td><td>✓</td><td></td></tr><tr><td>Seasoning can cause insect and fungal attack in wood</td><td></td><td>✓</td></tr><tr><td>Wood becomes heavier after it has been seasoned</td><td></td><td>✓</td></tr></tbody></table>		Seasoning	True	False	Seasoning reduces the moisture content in the wood	✓		Wood is easier to work after seasoning	✓		Seasoning can cause insect and fungal attack in wood		✓	Wood becomes heavier after it has been seasoned		✓	(1 each) 4 marks
Seasoning	True	False																
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Wood becomes heavier after it has been seasoned		✓																

(d)	(i) Name the parts labelled A and B ... A – Tool rest B – Tailstock		(1 + 1) 2 marks
	(ii) Two specific safety precautions • Wear face shield • Ensure the workpiece is securely held • Rotate work before starting to ensure free movement • Tie up long hair/loose clothing • Remove all jewellery • Remove toolrest when sanding • Adhere to Safe Operating Protocols (SOP) Any other appropriate precaution		(2 + 2) 4 marks
(e)	Describe two steps needed to prepare the block for mounting on the lathe • Draw the diagonals on both ends of piece to locate centre • Draw largest circle using compass • Draw an octagon on each end of the piece • Place wood in vice and plane the corners to octagonal shape • Punch hole in centre of timber to receive drive centre Any other appropriate step		(1 + 3) 4 marks (1 + 3) 4 marks
Question 3 Total			30 marks

Question 4

Q.	ANSWER	IMAGE(S)	MARKS																				
(a)	(i) Two considerations that should be investigated/researched when designing stand - Size of a gaming headset - How the gaming headset could be held on the stand - Safety of the stand – sharp edges, finish, etc - Possible materials that could be used to make the stand - Possible wood joints that could be used - Shape, stability, ease of use, aesthetics... Any other appropriate considerations		(2 +1) 3 marks																				
	(ii) Indicate using a tick ... <table><tr><th>Research</th><th>Primary</th><th>Secondary</th></tr><tr><td>Carrying out an interview</td><td>✓</td><td></td></tr><tr><td>Using the Internet to download images</td><td></td><td>✓</td></tr><tr><td>Looking up information in a Wood Technology book</td><td></td><td>✓</td></tr><tr><td>Taking pictures of other similar objects in a shop</td><td>✓</td><td></td></tr></table>		Research	Primary	Secondary	Carrying out an interview	✓		Using the Internet to download images		✓	Looking up information in a Wood Technology book		✓	Taking pictures of other similar objects in a shop	✓		(1 each) 4 marks					
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(b)	(i) Draw a neat freehand sketch of the elevation of the stand 		4 marks																				
	(ii) Complete the cutting list for the given headset stand in the table below <table><tr><th>Description</th><th>Quantity</th><th>Length</th><th>Width</th><th>Thickness</th></tr><tr><td>Base</td><td>1</td><td>180</td><td>100</td><td>20</td></tr><tr><td>Middle support</td><td>1</td><td>280 / 300</td><td>44</td><td>30</td></tr><tr><td>Top of stand</td><td>1</td><td>200</td><td>44</td><td>30</td></tr></table>		Description	Quantity	Length	Width	Thickness	Base	1	180	100	20	Middle support	1	280 / 300	44	30	Top of stand	1	200	44	30	(1 each) 3 marks
Description	Quantity	Length	Width	Thickness																			
Base	1	180	100	20																			
Middle support	1	280 / 300	44	30																			
Top of stand	1	200	44	30																			

(c)	(i) Name the joint shown ... Bridle joint		2 marks
	(ii) Give one advantage and one disadvantage of using the joint Advantage: very strong joint, large glue surface area, decorative joint, can be processed using hand tools, ... Disadvantage: a lot of processing to make the joint, end grain is visible, high level of accuracy required, ... Any other appropriate advantage or disadvantage		(2 + 2) 4 marks
	(iii) Name and sketch one other possible joint ... Halving joint, dovetail halving joint, mortice and tenon, dowel joint, ...		(1 + 4) 5 marks
(d)	Redesign the given headset stand to include a facility to hold two gaming controllers. Presentation of design solution: 1. Basic unit without any consideration for storage and accessibility of the controllers - sketch only (2 marks) 2. Fair attempt to store controllers so that they are easily accessible in an attractive, suitable stand/unit - to include annotations (4 marks) 3. Good well sketched design, showing some innovation and creativity in the storage of the controllers so that they are easily accessible – to include annotations (6 marks) 4. A very good quality design sketch of the stand/unit, showing original innovation and creativity in the storage of the controllers so that they are easily accessible. The sketch must be rendered or shaded and include annotations (8 marks)		8 marks
Question 4 Total			33 marks

Coursework Marking scheme 2023

My Design Journey Folio		
Heading	Description	Marks
Exploration of brief	Not examinable for 2023	
Investigate	Not examinable for 2023	
Generation of ideas	Not examinable for 2023	
My preferred design & justification	Presentation of your preferred design solution	20
	Consider and justify your design decisions made to arrive at the preferred design	
Working drawing(s) / Sketches	Not examinable for 2023	
Evaluation & Reflection on learning	Discuss the successes, challenges and learnings from completing your coursework	15
Artefact		
Artefact satisfies brief	The brief requirements are fulfilled in the presented artefact	30
Effective use of materials, processes and techniques	Sustainable and appropriate use of materials, processes and techniques in the completion of the artefact	20
Creativity	Expression of inventiveness and imagination in the artefact presented	30
Craft, skills and techniques	Demonstration of craft excellence in the construction of the artefact	60
Assembly of artefact	How well is the artefact assembled together	10
Finishing the artefact	The artefact materials have a high quality finish applied	20
Presentation	Overall presentation of the completed artefact	20
Overall Coursework Total in 2023		225