



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle 2024

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 2024

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

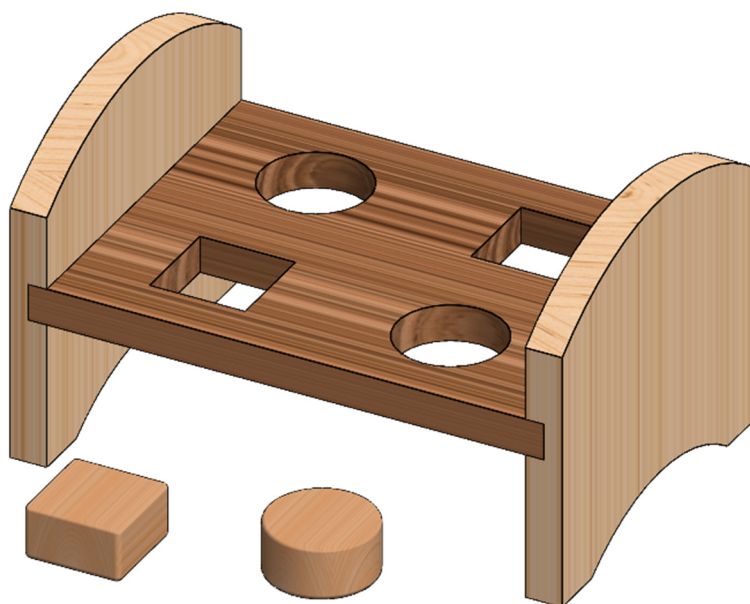


Junior Cycle Examination 2024

Wood Technology

Common Level

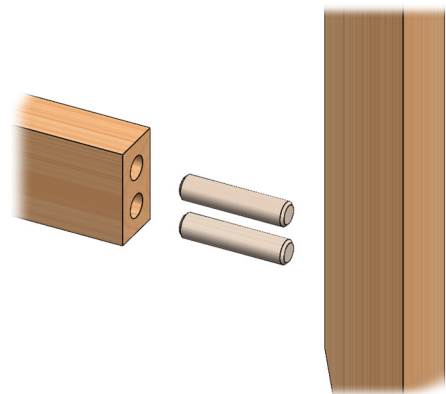
Marking Scheme

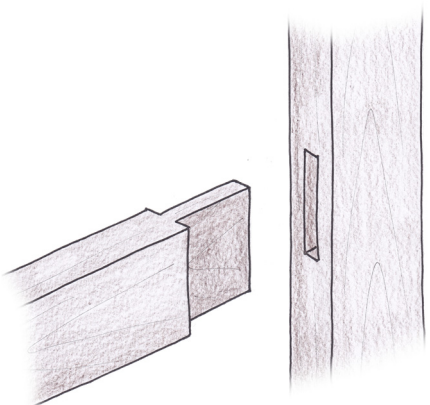
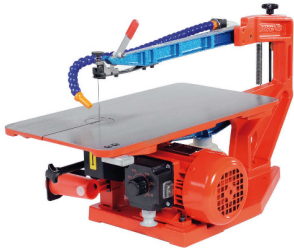


*The Sample solutions shown are presented as example answers.
All other valid solutions are acceptable and are marked accordingly.*

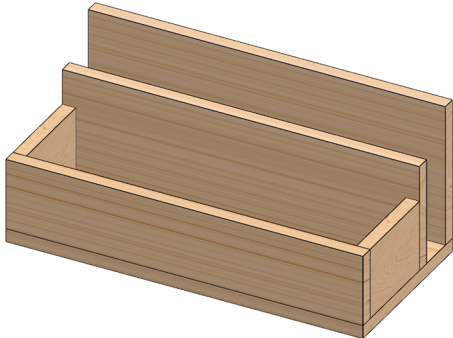
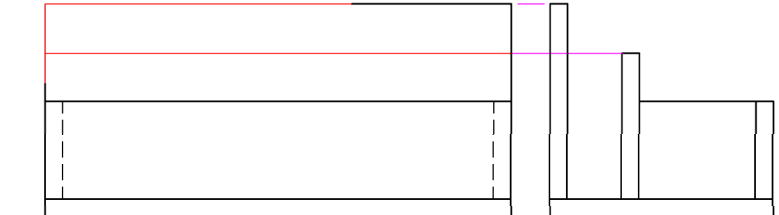
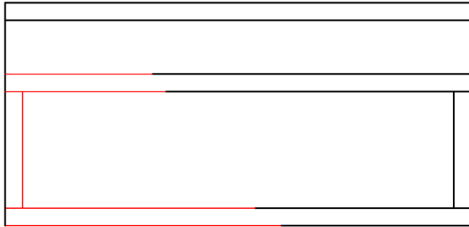
Answer all questions.

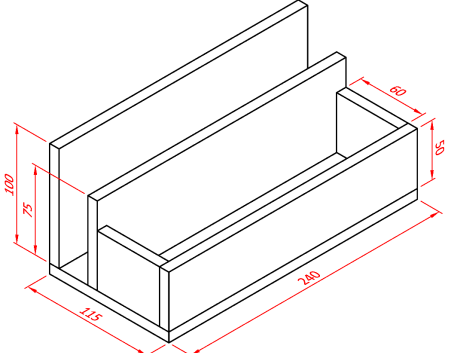
Question 1

Q.	ANSWER	IMAGE(S)	MARKS															
(a)	(i) Reason to use oak to make the stool. • Hardwearing wood • Environmentally friendly • Nice grain pattern • Wood is easy to work with... Any other appropriate reason.		2 marks															
	(ii) Indicate with a tick (✓).... <table><tr><th>Wood</th><th>Native</th><th>Non-Native</th></tr><tr><td>Ash</td><td>✓</td><td></td></tr><tr><td>Mahogany</td><td></td><td>✓</td></tr><tr><td>Sycamore</td><td>✓</td><td></td></tr><tr><td>Balsa</td><td></td><td>✓</td></tr></table>		Wood	Native	Non-Native	Ash	✓		Mahogany		✓	Sycamore	✓		Balsa		✓	(1 each) 4 marks
	Wood	Native	Non-Native															
Ash	✓																	
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Balsa		✓																
(iii) Give one reason for using native Irish hardwood instead of imported hardwoods. • More sustainable to use locally sourced timber • Planting local forest benefits the environment • Additional transport costs for imported timbers. Any other appropriate reason.		2 marks																
(b)	(i) Advantage and disadvantage of dowel joint. Advantage: • Easy to make • Quick to assemble/disassemble.... Disadvantage: • Difficult to drill the holes accurately • Weaker jointing method...		(2 + 2) 4 marks															

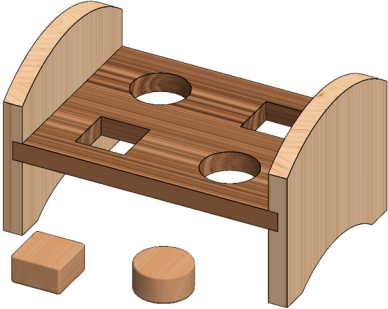
	(ii) Name and sketch one other possible joint... Mortise and tenon joint, halving joint, dovetail joint, domino joint.....		(1 + 4) 5 marks
(c)	(i) Name each of the cutting tools... A – Jigsaw B – Scroll saw C – Bandsaw	A 	(1 each) 3 marks
	(ii) Preferred machine to cut the round top Recommendation Suitable reason for tool/machine choice.	B 	(1 + 2) 3 marks
	(iii) List two specific safety precautions to be observed when using cutting tool B. - Always wear correct eye protection - Always wear dust mask - Keep fingers and hands away from blade - Loose or long sleeves should be rolled up - Hold material firmly on the table when cutting. Any other appropriate precaution.	C 	(2 + 2) 4 marks
Question 1 Total			27 marks

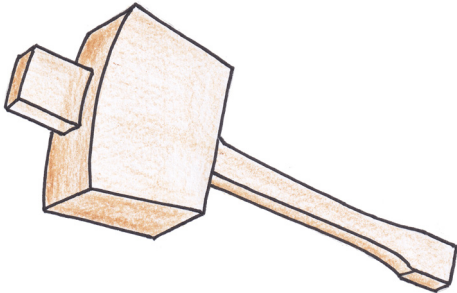
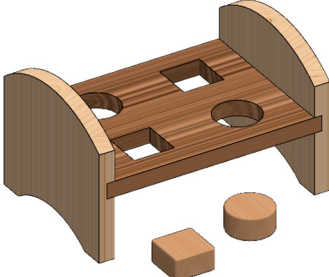
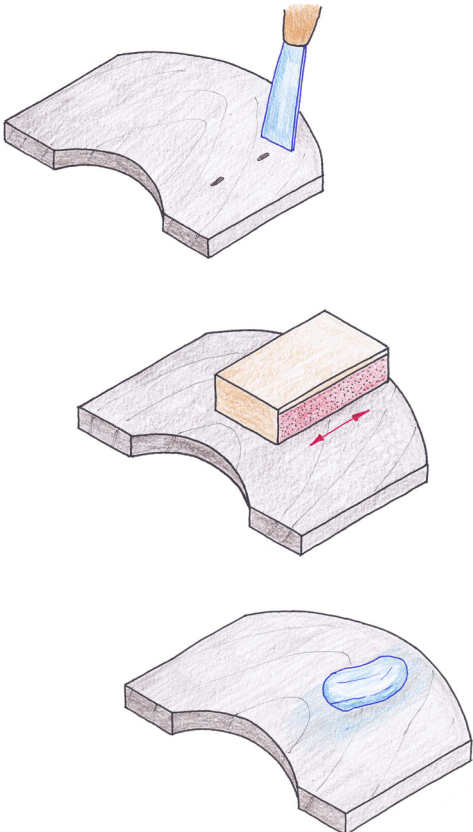
Question 2

Q.	ANSWER	IMAGE(S)	MARKS														
(a)	(i) Name two possible manufactured boards. • Lamwood/Pineboard • Plywood • Medium Density Fibreboard (MDF) • Chipboard...		(1 + 1) 2 marks														
	(ii) One advantage and one disadvantage of using a manufactured board... Advantage: • Available in large sheet sizes • Cheaper... Disadvantage: • Edges require additional edge finishing • Surface grain pattern not always attractive...		(2 + 2) 4 marks														
	(iii) Indicate with a tick (✓).... <table><thead><tr><th>Manufactured Boards</th><th>True</th><th>False</th></tr></thead><tbody><tr><td>Manufactured Boards are normally less expensive than solid wood</td><td>✓</td><td></td></tr><tr><td>Manufactured boards are more sustainable than using solid wood</td><td>✓</td><td></td></tr><tr><td>Manufactured boards grow in all soil types</td><td></td><td>✓</td></tr><tr><td>Manufactured boards are normally made from waste materials</td><td>✓</td><td></td></tr></tbody></table>		Manufactured Boards	True	False	Manufactured Boards are normally less expensive than solid wood	✓		Manufactured boards are more sustainable than using solid wood	✓		Manufactured boards grow in all soil types		✓	Manufactured boards are normally made from waste materials	✓	
Manufactured Boards	True	False															
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Manufactured boards grow in all soil types		✓															
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(b)	(i) Complete the elevation. 	3 marks															
	(ii) Complete the plan. 	3 marks															

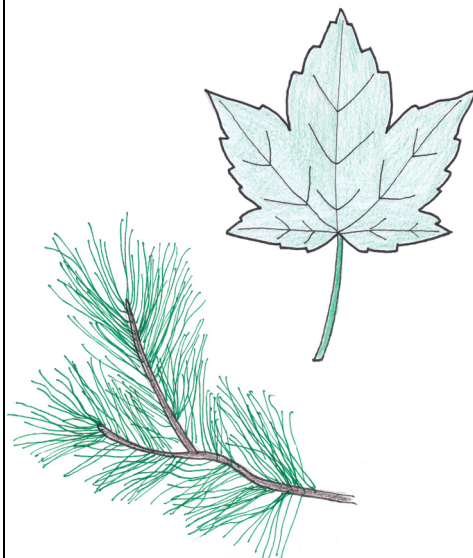
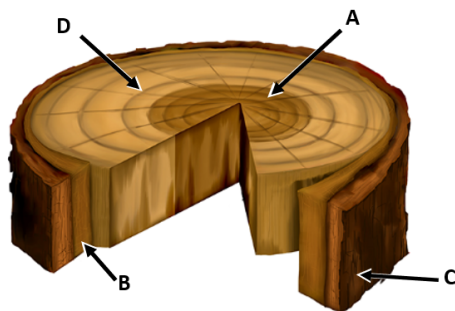
(c)	(i) Give one reason for preparing a cutting list. - Provides the list of all the materials and their sizes - Can be used when cutting/preparing material for a project - Used to find the cost a project - Reduces waste. Any other suitable reason		2 marks																														
	(ii) Complete the cutting list. <table><thead><tr><th>Description</th><th>Quantity</th><th>Length</th><th>Width</th><th>Thickness</th></tr></thead><tbody><tr><td>Base</td><td>1</td><td>240</td><td>115</td><td>9</td></tr><tr><td>Front</td><td>1</td><td>240</td><td>50</td><td>9</td></tr><tr><td>Back</td><td>1</td><td>240</td><td>100</td><td>9</td></tr><tr><td>Middle</td><td>1</td><td>240</td><td>75</td><td>9</td></tr><tr><td>Sides</td><td>2</td><td>60</td><td>50</td><td>9</td></tr></tbody></table>			Description	Quantity	Length	Width	Thickness	Base	1	240	115	9	Front	1	240	50	9	Back	1	240	100	9	Middle	1	240	75	9	Sides	2	60	50	9
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Question 2 Total				22 marks																													

Question 3

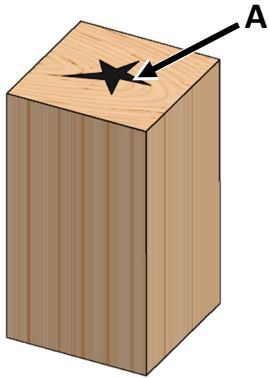
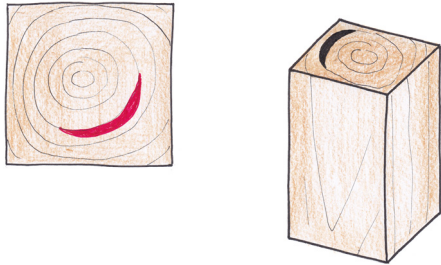
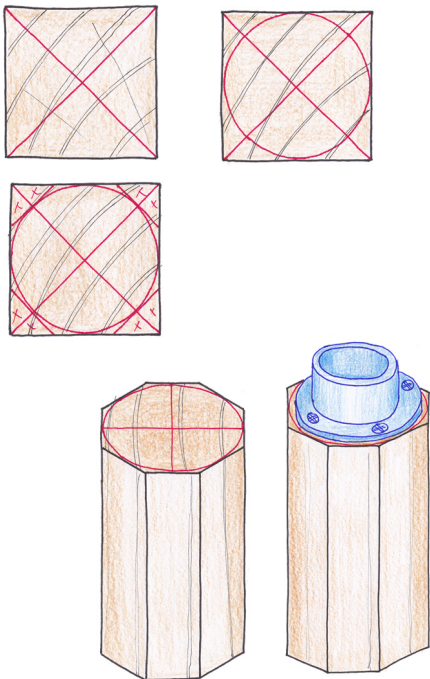
Q.	ANSWER	IMAGE(S)	MARKS
(a)	Two considerations to be taken into account when designing child's wooden toy. - Shape large enough that they cannot be swallowed - Non-toxic finish applied - No sharp edges - No loose parts - Fun to use/colourful. Any other suitable consideration.		(2 + 2) 4 marks
(b)	Name the marking out tool shown. Marking Gauge		2 marks

(c)	Name and sketch one tool that could be used to remove the trench. • Tenon saw • Dovetail saw • Firmer chisel • Mallet • Router. Any other suitable tool.		(1 + 4) 5 marks
(d)	Name a suitable finish and give one reason for choice. Waterbased varnish, beeswax.... Reason: • Non-toxic finish • Improves the surface finish of the toy... Any other suitable reason.		(1 + 2) 3 marks
(e)	Describe, using notes and sketches, any two steps involved in preparing the wood for your chosen finish. • Use a scraper to remove pencil marks or scratches • Fill any holes or imperfections • Sand all surfaces smooth using an abrasive paper – moving from course to fine • Dust down the surfaces • Wipe surfaces with a damp cloth • Cut back the raised grain using a fine abrasive paper • Wipe down with white spirits... Any other suitable step.		(4 + 4) 8 marks
Question 3 Total			22 marks

Question 4

Q.	ANSWER	IMAGE(S)	MARKS
(a)	(i) Give two reasons why it is necessary to manage Ireland's forests. • Provide a steady supply of timber to meet needs • Make appropriate use of land • Maintain eco-systems and biodiversity • Provide employment • Appropriate species can be planted. Any other suitable reason.		(2 + 2) 4 marks
	(ii) List two benefits of planting forestry. • Produce oxygen for our environment • Absorb CO² – reduce pollution • Provide for wellbeing – walking trails, green spaces, etc • Provide habitat from insects, animals and plants • Provide timber for timber industry • Provide employment • Appropriate species can be planted. Any other appropriate benefit.		(2 + 2) 4 marks
(b)	Describe, using notes and sketches, a characteristic of a hardwood leaf and softwood leaf. Hardwood Leaf: • Leaves are broad • Change colour in the autumn • Fall off trees in the autumn. Softwood leaf: • Narrow needle-shaped leaves • Have a waxy coating to protect • Stay on the trees in the winter.		(4 + 4) 8 marks
(c)	(i) Identify each part of the cross-section. A - Heartwood B - Bast C - Bark D - Annual rings		(1 each) 4 marks
	(ii) Function of the bark • Protects the trees from animals and insects • Prevents the trees from drying out • Insulates the tree against cold and heat. Any other appropriate function.		2 marks
Question 4 Total			22 marks

Question 5

Q.	ANSWER	IMAGE(S)	MARKS
(a)	(i) Identify the defect using a tick. Veneer ☐ Star shake ☒		1 mark
	(ii) Describe the effect of defect on wood. • Reduce the strength of the wood • Affect the appearance of the wood • Wood is more difficult to work with... Any other appropriate effect.		2 marks
	(iii) Name and sketch one other defect. • Cup shake • Ring shake • Heart rot • Live knot.		(1 + 3) 4 marks
(b)	Name of the woodturning item and give specific use. Safety shield Use: • Protect face when woodturning • Prevent wood shaving and dust getting into eyes when working...		(2 + 2) 4 marks
(c)	Describe two steps needed to prepare the block for mounting on the lathe. • Find the centre of the block • Mark out a circle on the block using a compass or template • Using an appropriate plane or saw, shape the circle or cut off corners to form an octagon • Align centre of block with centre of faceplate • Screw the faceplate onto the block using appropriately sized screws. Any other appropriate step.		(4 + 4) 8 marks

(d)	Design a stand to hold and display the six egg cups on a table. Presentation of design solution: 1. Basic unit/stand without any consideration for holding and displaying of the six egg cups. (2 marks) 2. Fair attempt to hold egg cups so that they are displayed and accessible in an attractive, suitable stand - to include annotations. (4 marks) 3. Good well sketched design, showing some innovation and creativity to hold the egg cups so that they are displayed and accessible – to include annotations. (6 marks) 4. An exceptional quality design sketch of the stand, showing original innovation and creativity to hold the egg cups so that they are displayed and accessible. The sketch must be rendered or shaded and include annotations. (8 marks)	8 marks
Question 5 Total		27 marks

Coursework Marking scheme 2024

My Design Journey Folio		
Heading	Description	Marks
Exploration of brief	Not examinable for 2024	
Investigate	Not examinable for 2024	
Generation of ideas	Not examinable for 2024	
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 2024	
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 2024		225

For 2024, the total marks for the coursework will be 225 marks instead of the 280 marks that will apply in normal years. The 70% coursework weighting (280 marks) will be retained by re-weighting the coursework mark before it gets added to the written mark.