



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle 2022

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.



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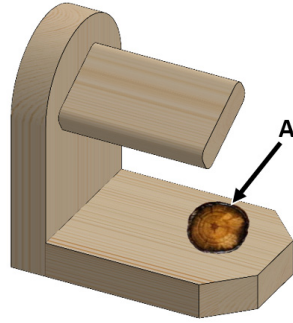
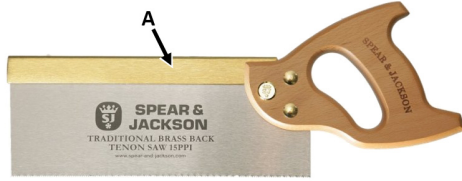
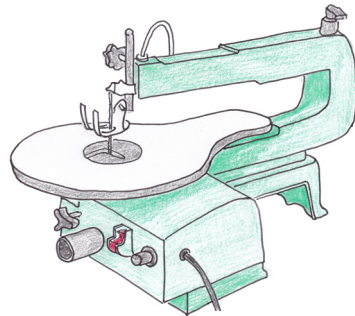
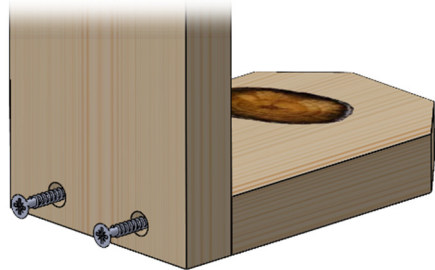
Marking Scheme

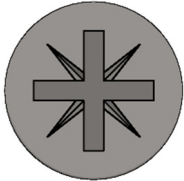
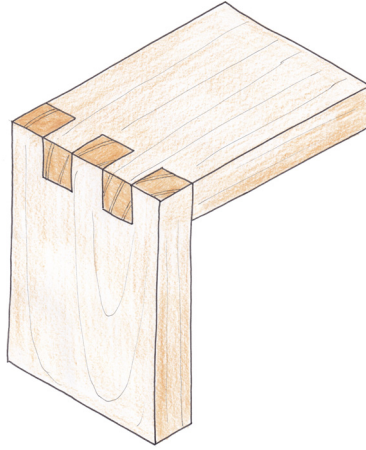


*The Sample solutions shown are presented as example answers.
All other valid solutions are acceptable and are marked accordingly.*

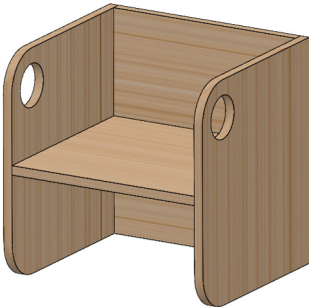
Answer all questions.

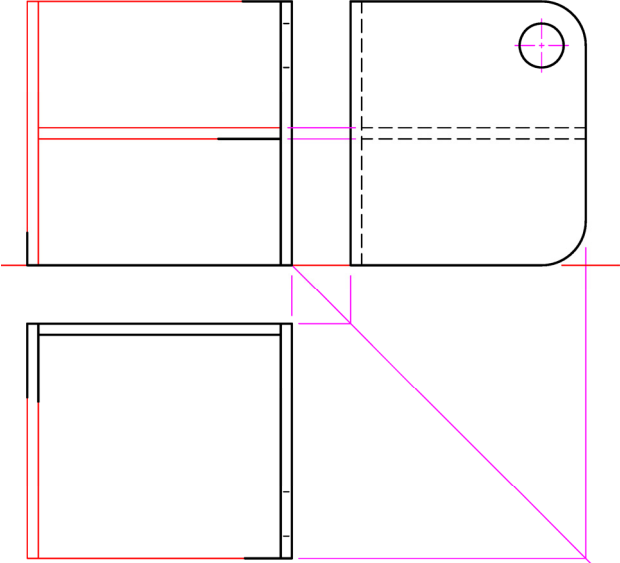
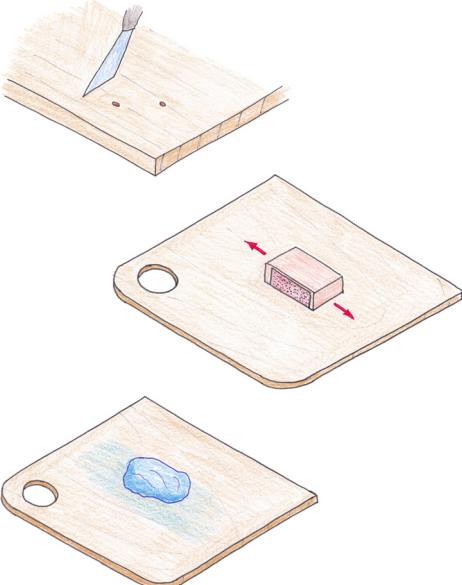
Question 1

Q.	ANSWER	IMAGE(S)	MARKS
(a)	(i) Name wood defect shown. Wood knot, live knot, dead knot, knot.		2 marks
	(ii) Describe how this defect can affect the wood. • Reduce the strength of the wood • Damage the appearance of the wood • Affects appearance/workability...		2 marks
(b)	Give two reason why marking out is an important process in Wood Technology. • To provide a guide to processing • Ensure accuracy of work • Ensure materials fit together. • Reduces waste • Identify waste...		(2 + 2) 4 marks
(c)	(i) Name the saw shown. Tenon Saw, back saw.		1 marks
	(ii) State the function of part A on the saw. Strengthens the blade, improves rigidity, keeps blade straight, adds weight, stiffens...		1 marks
	(iii) Name and sketch one other suitable saw.. Dovetail saw, coping saw, scroll saw, bandsaw, jigsaw, hand saw, Japanese saw...		(1 + 4) 5 marks
(d)	(i) Advantage and disadvantage of this joint. Advantage: • Quick to assemble/disassemble • Easy to make... Disadvantage: • Does not look well • Prone to splitting...		(2 + 2) 4 marks

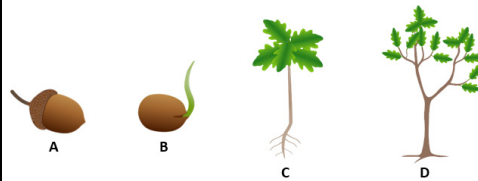
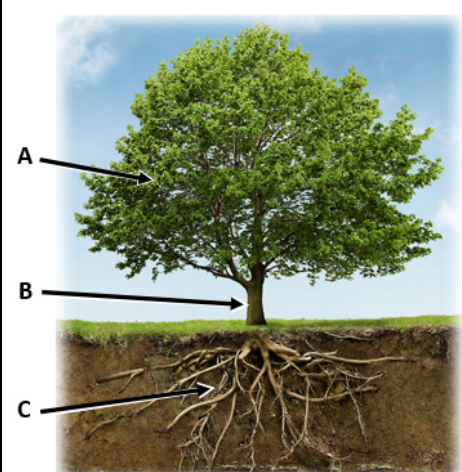
Q.	ANSWER	IMAGE(S)	MARKS
(d)	(ii) Identify the screw head and give advantage Pozidriv Advantage: - Better grip when inserting/removing the screw - Screwdriver fits easier...		(1 + 1) 2 mark
	(iii) Name and sketch one other possible joint.. Finger joint, dovetail joint, biscuit joint, dowels, domino joint, butt joint, lap joint...		(1 + 4) 5 marks
Question 1 Total			26 marks

Question 2

Q.	ANSWER	IMAGE(S)	MARKS															
(a)	(i) Name two possible manufactured boards. • Plywood • Laminboard • Medium density fibreboard...		(2 + 2) 4 marks															
	(ii) Recommend a board and give a reason.. • Suitable reason for board choice		(1 + 2) 3 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 available in large sheet sizes</td><td>✓</td><td></td></tr><tr><td>Manufactured boards are very stable</td><td>✓</td><td></td></tr><tr><td>Manufactured boards grow naturally</td><td></td><td>✓</td></tr><tr><td>Manufactured boards are free from natural defects</td><td>✓</td><td></td></tr></tbody></table>			Manufactured boards	True	False	Manufactured boards are available in large sheet sizes	✓		Manufactured boards are very stable	✓		Manufactured boards grow naturally		✓	Manufactured boards are free from natural defects	✓	
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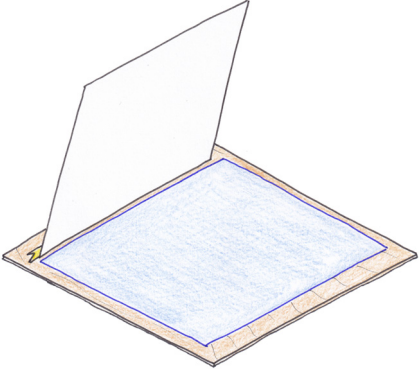
Q.	ANSWER	IMAGE(S)	MARKS
(b)	(i) Complete the elevation.		4 marks
	(ii) Complete the plan.		2 marks
(c)	(i) Name each of the sanding tools... A – Sanding block B – Palm, orbital, finishing, cordless, sander C – Sanding machine, bench/disk/belt sander...		(1 each) 3 marks
	(ii) List two specific safety precautions to be observed when using sanding tool C • Always wear correct eye protection • Always wear dust mask • Keep fingers and hands away from sanding disk • Loose or long sleeves should be rolled up • Hold material firmly against table when sanding...		(2 + 2) 4 marks
(d)	Describe, using notes and freehand sketches, two of the steps involved in preparing the wood. • 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...		(4 + 4) 8 marks
Total			32 marks

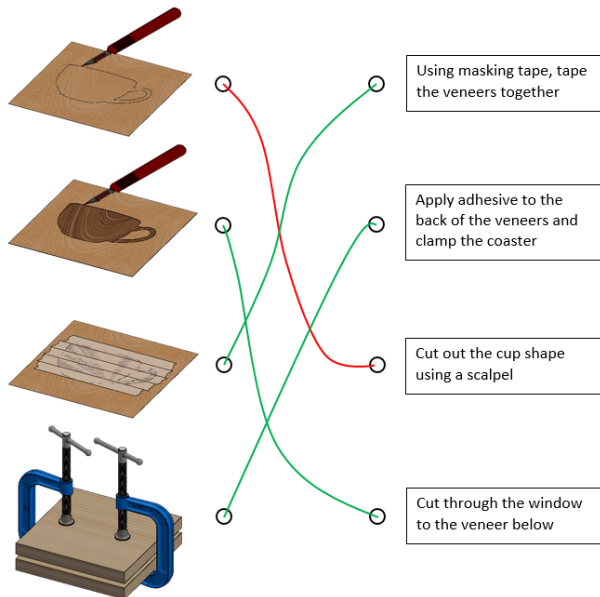
Question 3

Q.	ANSWER	IMAGE(S)	MARKS
(a)	(i) Two reasons why the Tree Council promotes the planting of trees. • Provide for wellbeing – green spaces, lower stress, walking trails, etc • Produce oxygen absorbs CO² • Provide habitat for animals, plants and insects – reduce pollution • Reducing flooding...		(2 + 2) 4 marks
	(ii) Identify each of the stages in the life cycle of an oak tree. A – Seed B – Germination C – Seedling D – Tree		(1 each) 4 marks
(b)	(i) Name the parts of the tree. A – Crown B – Trunk C – Roots		(1 each) 3 marks
	(ii) Give one function for each part.... Crown: • Produces the food for the tree to grow • Contains leaves to trap sunlight... Trunk: • Support the branches and leaves • Transport water and minerals... Roots: • Anchors the tree to the ground • Absorbs water and minerals from the ground.		(2 each) 6 marks

Q.	ANSWER	IMAGE(S)	MARKS															
(c)	(i) Using a tick (✓) to indicate which of these groups the words best relate to.	<table><tr><th>Trees</th><th>Deciduous</th><th>Coniferous</th></tr><tr><td>Needle shaped leaves</td><td></td><td>✓</td></tr><tr><td>Produce hardwood timber</td><td>✓</td><td></td></tr><tr><td>Trees grow quickly</td><td></td><td>✓</td></tr><tr><td>Lose leaves in the Autumn</td><td>✓</td><td></td></tr></table>	Trees	Deciduous	Coniferous	Needle shaped leaves		✓	Produce hardwood timber	✓		Trees grow quickly		✓	Lose leaves in the Autumn	✓		(1 each) 4 marks
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	Needle shaped leaves		✓															
Produce hardwood timber	✓																	
Trees grow quickly		✓																
Lose leaves in the Autumn	✓																	
	(ii) Name each tree. A – Oak B – Sycamore/Maple C – Ash/Rowan	A B C	(1 each) 3 marks															
	(iii) Name any two of the raw materials necessary for photosynthesis... • Sunlight • Carbon dioxide • Sap (water and minerals) • Chlorophyll		(1 + 1) 2 marks															
(d)	Design a poster to explain the process of photosynthesis in trees. • Sketch of process • Notes on three stages in process: ○ The roots draw up water and minerals ○ Water and minerals are transported up to the leaves ○ The leaves take in carbon dioxide from the air ○ The leaves trap energy from sunlight ○ The photosynthesis process take place in the leaves ○ The leaves release oxygen into the air ○ The glucose produced is used by the tree for growth. - Any other appropriate step		8 marks															
Question 3 Total			34 marks															

Question 4

Q.	ANSWER	IMAGE(S)	MARKS
(a)	(i) Name this veneering craft technique. Marquetry		2 marks
	(ii) Identify the cutting method shown. Rotary cut ☒ Flat slicing ☐		1 marks
	(iii) Give two reasons for using veneers instead of solid wood. • Reduce the use of solid wood • Cheaper than solid wood • Sustainable use of wood/Good for the environment • Maximises the use of solid wood...		(2 + 2) 4 marks
(b)	Describe two of the steps required to transfer the cup outline onto veneer • Tape the drawing to one edge of the wood • Insert a sheet of carbon paper underneath the drawing • Trace over the design • Check all lines are visible on the wood before removing sheets OR • Cut around drawing • Tape this template to the wood • Trace around the template with a pencil • Sketch in missing parts as accurately as possible.	 	(4 + 4) 8 marks

Q.	ANSWER	IMAGE(S)	MARKS
(c)	(i) Match each steps... 	Using masking tape, tape the veneers together Apply adhesive to the back of the veneers and clamp the coaster Cut out the cup shape using a scalpel Cut through the window to the veneer below	(1 each) 3 marks
	(ii) Name the tool. G clamp		2 marks
(d)	Design a table top holder to store the six coasters. Presentation of design solution: 1. Basic unit/box without any consideration for stacking and accessibility of the six coasters - sketch only (2 marks) 2. Fair attempt to store coasters so that they are easily stacked and 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 coasters so that they are easily stacked and accessible – to include annotations (6 marks) 4. An exceptional quality design sketch of the stand/unit, showing original innovation and creativity in the storage of the coasters so that they are easily stacked and accessible. The sketch must be rendered or shaded and include annotations (8 marks)		8 marks
Question 4 Total			28 marks

Coursework Marking scheme 2022

My Design Journey Folio		
Heading	Description	Marks
Exploration of brief	Not examinable for 2022	
Investigate	Not examinable for 2022	
Generation of ideas	Not examinable for 2022	
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 2022	
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 2022		225

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