



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate 2017

Marking Scheme

Materials Technology Wood

Higher 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.



Junior Certificate Examination 2017

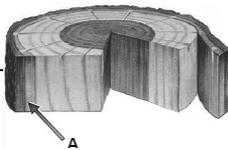
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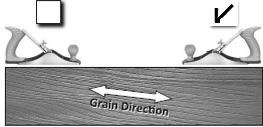
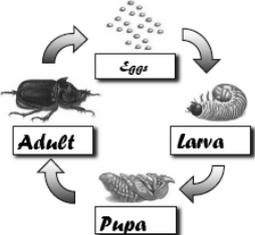


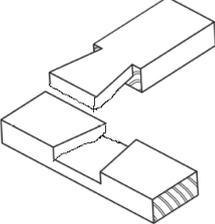
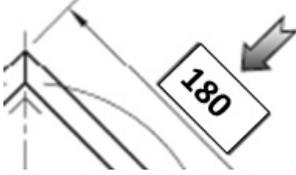
*The Sample solutions shown are presented as example answers.
All other valid solutions are acceptable and are marked accordingly.*

SECTION A

Mark for best 16 answers. Disallow marks for any questions/parts of questions in excess of 16 as per instructions to Assistant Examiners

QUESTION	ANSWER	MARKS										
1.	(i) Correct name for the tool... <i>Tenon/Back/Dovetail Saw</i>	 3 marks										
	(ii) Specific use for this tool... <i>To cut joints, timber, tenons...</i>	2 marks										
2.	PVA... <i>Poly Vinyl Acetate</i>	 2 x 2 marks 1 x 1 mark										
3.	(i) Woodworking machine... <i>Pillar/Pedestal/Bench Drill/Drilling Machine...</i>	 3 marks										
	(ii) Safety features... <i>Chuck guard, emergency stop, table lock, secured base, depth stop, CE mark, keyless chuck...</i>	2 x 1 mark										
4.	(i) Part A... <i>Bast/Cambium/Inner bark/Bark</i>	 3 marks										
	(ii) Function of part A... <i>Transport/cell production, protect ...</i>	2 marks										
5.	(i) Vice jaws... <i>Hold timber without damaging it or marking it</i>	 3 marks										
	(ii) Force... <i>Compression...</i>	2 marks										
6.	Identity of trees... <table border="1" style="width: 100%; text-align: center; margin: 10px 0;"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sycamore</td> <td>Horse Chestnut</td> <td>Rowan</td> <td>Oak</td> <td>Beech</td> </tr> </table> or Mountain Ash						Sycamore	Horse Chestnut	Rowan	Oak	Beech	5 x 1 mark
												
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7.	Kiln Seasoning... <table style="margin-left: auto; margin-right: auto;"> <tr><td style="border: 1px solid black; padding: 2px;">1. FAN</td></tr> <tr><td style="border: 1px solid black; padding: 2px;">2. STEAM JETS</td></tr> <tr><td style="border: 1px solid black; padding: 2px;">3. HEATING COILS</td></tr> <tr><td style="border: 1px solid black; padding: 2px;">4. STICKERS/SPACERS</td></tr> <tr><td style="border: 1px solid black; padding: 2px;">5. TROLLEY</td></tr> </table>	1. FAN	2. STEAM JETS	3. HEATING COILS	4. STICKERS/SPACERS	5. TROLLEY	5 x 1 mark					
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8.	(i)	Woodworking tool... Cross pein/Warrington/Pin Hammer		3 marks
	(ii)	Function of X... Nailing/driving panel pins		2 marks
9.	(i)	Direction for planing... From right to left		3 marks
	(ii)	Reason... Easier, better finish, smoother...		2 marks
10.	(i)	Name of tool... Marking knife.		3 marks
	(ii)	Use... Scoring/Cutting fine lines across the grain		2 marks
11.	(i)	Wood-boring beetle... Larva, Pupa, Adult		3 x 1 mark
	(ii)	Damaging stage... Larva		2 marks
12.	(i)	Method of conversion... Radial, quarter sawn, rift		3 marks
	(ii)	Other conversion method... Tangential/Box/Through and through/Slash Sketch		1 mark 1 mark
13.		Raw materials for photosynthesis... Sunlight, Carbon dioxide, Sap (water and minerals), Chlorophyll		2 x 2 marks 1 mark
14.	(i)	Name of power tool... Mitre Saw, Chopsaw, Crosscut Saw...		3 marks
	(ii)	Precaution... Wear goggles, tie up long hair, no loose clothing, secure the workpiece...		2 marks
15.	(i)	CNC... Computer Numerical Control		3 x 1 mark
	(ii)	Advantage of CNC... Accurate, fast, easily reproduced, safer...		2 marks
16.	(i)	Craft technique... Marquetry		3 marks
	(ii)	Name and use of associated tool... Craft knife/scalpel, steel rule, clamp, cutting mat, veneer hammer/roller, veneer saw, veneer press...		2 x 1 mark

17.	Woodturning items... <i>(Roughing out) Gouge</i> <i>(Live/revolving)Centre</i> <i>Faceplate</i> <i>Vernier caliper</i> <i>Parting Tool</i> 	5 x 1 mark																														
18.	Plastics... <table border="1"> <thead> <tr> <th>Thermoplastic</th> <th>Plastic</th> <th>Thermosetting</th> </tr> </thead> <tbody> <tr> <td>✓</td> <td>uPVC</td> <td></td> </tr> <tr> <td>✓</td> <td>Nylon</td> <td></td> </tr> <tr> <td></td> <td>Epoxy Resin</td> <td>✓</td> </tr> <tr> <td>✓</td> <td>Acrylic</td> <td></td> </tr> <tr> <td>✓</td> <td>Polythene</td> <td></td> </tr> </tbody> </table>	Thermoplastic	Plastic	Thermosetting	✓	uPVC		✓	Nylon			Epoxy Resin	✓	✓	Acrylic		✓	Polythene		5 x 1 mark												
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19.	Exploded dovetail sketch... 	2 x 2 marks 1 x 1 mark																														
20.	Cutting List...  <table border="1"> <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>200</td> <td>190</td> <td>12</td> </tr> <tr> <td>Sides</td> <td>2</td> <td>165</td> <td>126</td> <td>12</td> </tr> <tr> <td>Front/Back</td> <td>2</td> <td>245</td> <td>190</td> <td>12</td> </tr> <tr> <td>Roof</td> <td>2</td> <td>180</td> <td>200</td> <td>12</td> </tr> <tr> <td>Dowel</td> <td>1</td> <td>62</td> <td colspan="2">Ø12</td> </tr> </tbody> </table>	Description	Quantity	Length	Width	Thickness	Base	1	200	190	12	Sides	2	165	126	12	Front/Back	2	245	190	12	Roof	2	180	200	12	Dowel	1	62	Ø12		5 x 1 mark
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Running total of allowed questions for this section to be recorded and shown as indicated at the marking conference.