

## FURNITURE MAKING

### SCHEME OF EXAMINATION

There will be three papers, Papers 1, 2 and 3 all of which must be taken. Papers 1 and 2 shall be a composite paper to be taken at one sitting.

<b>S/NO.</b>	<b>CONTENTS</b>	<b>NOTES</b>
1	Furniture Workshop.	<ul style="list-style-type: none"><li>- Workshop safety rules and regulations</li><li>- Hand tools safety</li></ul>

		<ul style="list-style-type: none"> <li>- Workshop bench and appliances</li> <li>- Machine tools safety</li> <li>- Portable power tools safety</li> </ul>
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**Paper 1:** will consist of forty multiple-choice objective questions all of which are to be answered in 45 minutes for 40 marks.

**Paper 2:** will consist of two sections, Sections A and B to be answered in 2 hours for 60 marks.

Section A will consist of ten compulsory short-structured questions to be answered in 30 minutes for 20 marks.

Section B will consist of three questions on design and drawing: out of which one will be compulsory. Each question shall require sketches and candidates will be required to answer the compulsory question for 30 marks and any other one for 10 marks in 1½ hours.

**Paper 3:** will be a practical test of 3 hour duration. It will consist of one practical question for 100 marks.

A list of materials for the test shall be made available to schools not less than two weeks before the paper is taken for material procurement and relevant preparations.

#### Alternative to Practical Test

Alternatively, in the event that materials for the actual practical test cannot be acquired, the Council may consider testing theoretically, candidates' level of acquisition of the practical skills prescribed in the syllabus. For this alternative test, there will be two sets of compulsory questions both of which must be answered in 2 hours for 100 marks.

### DETAILED SYLLABUS

		- Sources of workshop accident.
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2	Furniture Making Materials.	<ul style="list-style-type: none"> <li>- Timber growth, structure, classification, parts and cross section.</li> <li>- Conversion of timber, methods, advantages and disadvantages.</li> <li>- Seasoning of timber, methods, advantages and disadvantages.</li> <li>- Defects in timbers, causes, classification, illustrations with sketches.</li> <li>- Preservation of timber, preservatives - characteristics, types and applications.</li> <li>- Manufactured boards, types, method of production, uses, advantages, disadvantages and sketches.</li> <li>- Wood adhesive definition applications, preparation, types, uses and characteristics.</li> <li>- Nails and uses – sketches, methods of driving in nails.</li> <li>- Screw types and uses, illustration with sketches and methods of driving in screws.</li> <li>- Cabinet fittings, types, uses, sketches and procedures of fittings.</li> </ul>
3	Woodworking tools and equipment.	<ul style="list-style-type: none"> <li>- Hand tools – types, classification, uses and sketches.</li> <li>- Machines – types, uses and operation.</li> <li>- Portable power tools – types and operations. Other tools and equipment used in furniture making.</li> <li>- Maintenance of furniture tools and equipment.</li> </ul>
4	Furniture Design and Construction.	<ul style="list-style-type: none"> <li>- Timber preparation – cutting to sizes, marking and planing timber to final sizes.</li> <li>- Common wood work joints – types, classification and uses.</li> <li>- Construction – types of construction-frame box construction.</li> <li>- Free hand sketching of common household furniture items.</li> <li>- Design fundamentals, elements and principles of design.</li> <li>- Stages – preliminary sketches and working drawing.</li> <li>- Planning – working rod, selection of materials, cutting list.</li> </ul>

		<ul style="list-style-type: none"> <li>- Construction of different items of furniture, procedures – preparation of materials, setting out of joints, cutting of joints, assembling and finishing.</li> </ul>
5	Upholstery work.	<ul style="list-style-type: none"> <li>- Meaning and forms.</li> <li>- Tools and machines.</li> <li>- Traditional and modern padding materials.</li> <li>- Design and construction of upholstery frames.</li> <li>- Padding and stuffing.</li> <li>- Fixing sewn materials.</li> </ul>
		<ul style="list-style-type: none"> <li>- Business opportunities in furniture making.</li> </ul>
6	Entrepreneurship in furniture marking.	<ul style="list-style-type: none"> <li>- - Starting a furniture business, factors to be considered. Managing of furniture workshop, estimate and costing of furniture item.</li> </ul>

**LIST OF FACILITIES AND MAJOR EQUIPMENT/MATERIALS REQUIRED:**

ITEM NO	EQUIPMENT	QUANTITY REQUIRED
1.	Try Square	20
2.	Mitre Square	10
3.	Sliding Bevel	10
4.	Marking Gauge	10
5.	Mortise Gauge	10
6.	Marking knives	10
7.	Four Fold (wooden Rule)	10
8.	Tape Rule (Metric)	20
9.	Jack Plane	10
10.	Smooth Plane	10
11.	Trying Plane (jointing Plane)	5
12.	Block Plane	5
13.	Rebate Plane	5
14.	G Clamp	5
15.	Plough Plane	5
16.	Bull Nose Plane	2
17.	Router Plane	2
18.	Rip Saw	10

19.	Crosscut Saw	10
20.	Tenon Saw	15
21.	Panel Saw	10
22.	Coping Saw	5
23.	Compass Saw	2
24.	Nest of Saws	2
25.	Keyhole/pad Saw	1
26.	Fret Saw	2
27.	Dovetail Saw	5
28.	Firmer Chisel	10 sets
29.	Bevelled Edge Firmer Chisel	10 sets
30.	Mortise Chisel (set)	10 sets
31.	Turning Chisel	2 sets
32.	Centre bit	5 sets
33.	Auger Bit	5 sets
34.	Twist Bit	5 sets
35.	Rose	2 sets

36.	Bradawl	10
37.	Gimlet	5 sets
38.	Ratchet brace	5
39.	Dowel Rounder	5
40.	Drill Bit	10 sets
41.	Screw Driver (set of 6)	5 sets
43.	Mallet	20
44.	Claw Hammer	10
45.	Cross Pein Hammer	10
46.	Ball Pein Hammer	10
47.	'F' Clamp	10
48.	Sash Clamp	10
49.	Hand Screw	10
50.	Bench Holdfast	5
51.	Mitre Box	5

52.	Mitre Cramp	5
53.	Mitre Shooting Board	5
54.	Flat Files (assorted)	10
55.	Scraper(flat)	10
56.	Dividers	10
57.	Pincers	5
58.	Spoke shave	2
59.	Dowelling jig	5
60.	Rasps	10
61.	Sewing Machine	2
62.	Scissors	10
63.	Staple Gun	2
64.	Needle (set) Curved and Straight	10
65.	Tack Hammer	10
66.	Pliers	5
67.	Magnetic Hammer	5
68.	Ripping Chisel	5
69.	Knives	5
70.	Tape (tailors type)	10
71.	Web Strainer	10
72.	Spring Cutter	5
73.	Spanner (set)	2 sets
74.	Wrenches	2 sets
75.	Botton Making Machine	2
76.	Work Bench	10
77.	Bench Vice	20
78.	Paint brush (sets)	5
79.	Putty knives	5
80.	Storage box	2
81.	Water stone	2
82.	Oil can	2
83.	Veneer hammer	2
84.	First-aid box	1

APPENDIX E:

SUGGESTED READING LIST

S/N	NAME	AUTHOR	PUBLISHER
1	WOODWORK FOR G.C.E &C.S.E (Metric Edition)	J.N GREEN	Mills and Boon Ltd
2	WOODWORK IN THEORY & PRACTICE	JOHN .A.WALTON	
3	MODERN WOODWORKING	WILLIS .H.WAGNER	The Goodheart - Willcox,Inc
4	WOOD OCCUPATIONS	PETER BRETT	Nelson Thorns
5	THE THEORY AND PRACTICE OF WOODWORK (4 <sup>th</sup> Edition)	GEORGE LOVE	Longman
6	CONSTRUCTING MODERN FURNITURE	VICTOR .J.TAYLOR	Sterlin g publishing Co.Inc New York
7	PRACTICAL UPHOLSTERY	C.HOWES F.A.M.U	Evans brothers Ltd London
8	WOODWORK DESIGN AND PRACTICE	DAVID .M.SHAW	Hodder and Stoughton London Sydney,Auckland Toronto