

National Occupational Skill Standard (NOSS)

Occupational Title : Furniture Maker

Level : 3

Sector : Construction

Sub - Sector : Wood work

NOSS ID/NSCO ID :

ISCO NO :



Council for Technical Education and Vocational Training

NATIONAL SKILL TESTING BOARD

Madhyapur Thimi-17, Sanothimi, Bhaktapur, Nepal



2045

Developed: 02-04-2023 (19-12-2079)

The Occupational Skill Standard Developed By:

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2.	Mr. Sanukaji Sthapit	Member
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5.	Mr. Dobar Lal Shilakar	Member
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Approve by the tripartite National Skill Testing Board.

1989



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The National Occupational Skill Standard Developed by:

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Recommended by Construction Technical Sub Committee: 02 April 2023 (19 Chaitra 2079)



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1	Occupational Title: Furniture Maker Level: 3
2	Job Description: Furniture Maker, L-3, prepares design for wooden furniture products, fabricates wooden furniture products, performs finishing of wooden furniture products, repairs, restores and modifies wooden furniture products.
	UNITS OF COMPETENCY: <ol style="list-style-type: none"> 1. Prepare design for wooden furniture products 2. Fabricate wooden furniture products 3. Perform finishing of wooden furniture products 4. Repair and modify wooden furniture products 5. Perform communication 6. Develop professionalism <p>*Note: Units 5 and 6 are not for testing purpose.</p>
4	Qualifying Notes/Prerequisites: <ul style="list-style-type: none"> • Physical Requirements: Sound health • Entry Requirements: As per NSTB rules Additional Information: <ul style="list-style-type: none"> • Assessment Types: Performance test only. • Assessment Duration: 20 to 24 Hours (Full competency) • Recommended Group Size: 6 to 8 Candidates



5	Unit No:1			
	Unit Title: Prepare design for wooden furniture products			Unit code:
	Elements of competency			Performance standards
	1.1 Prepare tools, equipment and materials			1.1.1 Personal Protective Equipment (PPE) used in accordance with task requirement.
				1.1.2 Tools and equipment prepared as per task requirement.
		1.1.3 Tools, equipment and materials arranged in workplace allowing enough space to work.		
1.2 Prepare sketch and drawing		1.2.1 Furniture product requirement collected from clients.		
		1.2.2 Sketch of furniture product prepared as per client's requirement.		
		1.2.3 Different views of furniture product prepared as per client's requirement.		
		1.2.4 Prepared design shared with clients and finalized based on client's feedback.		
1.3 Prepare cost estimate		1.3.1 Required materials type and quantity listed as per drawing.		
		1.3.2 Materials cost estimated based on market price.		
		1.3.3 Time and labour required to manufacture furniture product determined and labour cost estimated based on job.		
		1.3.4 Total cost of furniture product calculated based on estimates.		
		1.3.5 Total cost documented according to workplace format and informed to clients.		
1.4 Prepare template		1.4.1 Layout drawn on the materials in full size (1:1) as per drawing.		
		1.4.2 Materials cut to required shape.		
		1.4.3 Template prepared and finished as per drawing.		
		1.4.4 Template coated with preservative materials .		
		1.4.5 Template labelled and stored in designated area.		



	1.5 Clean workplace	1.5.1 Unused materials collected and stored in designated area. 1.5.2 Tools and equipment cleaned, checked for damage and stored in designated area. 1.5.3 Workplace cleaned neatly and waste disposed as per 3R's principle at designated area.
6	Task Performance Requirements (Tools, Equipment and Materials): <ul style="list-style-type: none"> Ruler, pencil, pen, paper, sharpener, eraser, marker, compass, drawing table, camera, highlighter, notebook, measuring tape, power tools, French curve, set square, T scale, paper scale, sliding T bevel, spoke shave, chisel, mallet, sharpening stone, file, clamp, cloth, dust collector, dust pan, dust bin, broom, brush, air blower, materials, first aid kit and personal protective equipment. 	
7	Safety and Hygiene (Occupational Health and Safety): <ul style="list-style-type: none"> Use personal protective equipment. Safe handling of materials, tools and equipment. Hazards involved in sharpening tools. Isolate electric and fire hazards (tripping, electric shock, burns). Safe handling of debris. 	



8	Required Knowledge		
	Technical Knowledge	Applied Calculation	Graphical Information
	<ul style="list-style-type: none"> • Tools and equipment <ul style="list-style-type: none"> ○ Uses ○ Safe handling • Furniture types and furniture parts • Different types of furniture design • Current market trends • Furniture specification • Furniture sketch and drawing • Multiview and pictorial drawing • Furniture design software • Furniture materials and finishes • Costing and estimation • Template making process • Record keeping • Waste management • Occupational health and safety (OHS) • Use of first aid kit 	<ul style="list-style-type: none"> • Convert metric unit to imperial and vice versa • Calculate material cost • Calculate labour cost • Calculate actual cost 	<ul style="list-style-type: none"> • Read and interpret drawing and specification • Read and interpret manufacturer's instruction



9	Assessment of Competency				
Unit: 1					
Unit Title: Prepare design for wooden furniture products					
Candidate Details			Assessors Detail		
Candidate's Name:			Assessors' Name		ID/License No:
Registration Number:			1.		
Symbol No:			2.		
Test Centre:			3.		
Test Date:					
Element of competency	Performance Standards	Standard Met	Standard Not Met	Evidence Type	Comments
1.1 Prepare tools, equipment and materials	1.1.1 Personal Protective Equipment (PPE) used in accordance with task requirement.				
	1.1.2 Tools and equipment prepared as per task requirement.				
	1.1.3 Tools, equipment and materials arranged in workplace allowing enough space to work.				
1.2 Prepare sketch and drawing	1.2.1 Furniture product requirement collected from clients.				
	1.2.2 Sketch of furniture product prepared as per client's requirement.				
	1.2.3 Different views of furniture product prepared as per client's requirement.				
	1.2.4 Prepared design shared with clients and finalized based on				



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	client's feedback.				
1.3 Prepare cost estimate	<p>1.3.1 Required materials type and quantity listed as per drawing.</p> <p>1.3.2 Materials cost estimated based on market price.</p> <p>1.3.3 Time and labour required to manufacture furniture product determined and labour cost estimated based on job.</p> <p>1.3.4 Total cost of furniture product calculated based on estimates.</p> <p>1.3.5 Total cost documented according to workplace format and informed to clients.</p>				
1.4 Prepare template	<p>1.4.1 Layout drawn on the materials in full size (1:1) as per drawing.</p> <p>1.4.2 Materials cut to required shape.</p> <p>1.4.3 Template prepared and finished as per drawing.</p> <p>1.4.4 Template coated with preservative materials.</p> <p>1.4.5 Template labelled and stored in designated area.</p>				
1.5 Clean workplace	<p>1.5.1 Unused materials collected and stored in designated area.</p> <p>1.5.2 Tools and equipment cleaned, checked for damage and stored in designated area.</p> <p>1.5.3 Workplace cleaned neatly and waste disposed as per 3R's</p>				



	<i>principle</i> at designated area.				
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WT- Written Test

OQ- Oral Question

PT- Practical Test

DO – Direct Observation

SR- Supervisor’s report

SN–Simulation

RP- Role Play

PG –Photographs

VD- Video

CT – Certificates

TS – Testimonials (Reward)

PP – Product Produced

CS – Case Study



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Range Statement

Variable	Range
Personal Protective Equipment	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Helmet • Hair net • Apron/Safety Jacket • Goggles • Gloves • Safety shoes • Mask • Ear plug
Furniture product	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Table: Dressing table, console table, round/oval table, study table with bookcase, drop-leaf table • Cabinet: TV unit, shoe rack, kitchen cabinet, bar cabinet, filling cabinet • Wardrobe with sliding/rabbit shutter • Bed: Hydraulic bed, bunk bed • Chair: Upholstery chair, rocking chair, bar chair, dressing chair, folding chair • Chest of drawer
Different views	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Top view • Front view • Side view • Sectional view • Isometric/Oblique view



<p>Materials</p>	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Wood • Ply wood • Boards • Furniture finishes • Paints • Polish • Laminating materials • Lipping/edge bindings • Finishing materials • Hardware, fittings and accessories • Glasses and mirrors
<p>Preservative materials</p>	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Shellac • Varnish • Lacquer
<p>3R's principle</p>	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Reduce • Reuse • Recycle



5	Unit No: 2		Unit code:		
	Unit Title: Fabricate wooden furniture products				
	Elements of competency		Performance standards		
	2.1 Prepare tools, equipment and materials		2.1.1 Personal Protective Equipment (PPE) used in accordance with task requirement. 2.1.2 Tools and equipment checked and prepared as per the task requirement. 2.1.3 Materials collected and checked for defects . 2.1.4 Tools, equipment and materials are arranged in workplace allowing enough space to work.		
	2.2 Prepare furniture parts		2.2.1 Quality workpiece measured and cut to required angle and dimension. 2.2.2 Workpiece planned along the grain maintaining straightness, level and right angle. 2.2.3 Joints prepared on workpiece according to drawing. 2.2.4 Trail fitting performed and joints corrected to fit well and flushed. 2.2.5 Prepared furniture parts labelled and stacked in designated area.		
2.3 Assemble furniture parts		2.3.1 Prepared furniture parts arranged for assembling. 2.3.2 Furniture parts fitted and fastened in assembly sequence without damage. 2.3.3 Assembled furniture product checked for compliance with drawing and specification. 2.3.4 Twist, distortion, fittings and level adjusted as per requirement.			
2.4 Install laminating materials		2.4.1 Laminating surface prepared using surface preparation technique . 2.4.2 Laminating materials cut to required dimension matching pattern and texture. 2.4.3 Adhesives evenly applied to laminating surface and the back of laminating materials. 2.4.4 Laminating materials pasted on required surface in matching pattern and texture. 2.4.5 Laminated surface masked tightly and masking tape removed once fully bonded.			



		<p>2.4.6 Laminated surface checked for peeling or air bubble and refixed.</p> <p>2.4.7 Excess laminate surface trimmed from edges in line and level without damage.</p>
2.5	Install furniture accessories	<p>2.5.1 Furniture hardware, fastener and fittings selected as per drawing and specification and checked for smooth operation and damage.</p> <p>2.5.2 Housing prepared as per furniture hardware on furniture product in designated place.</p> <p>2.5.3 Surface drilled/bored as per furniture hardware.</p> <p>2.5.4 Furniture hardware fitted and fastened as per manufacturer’s instruction.</p> <p>2.5.5 Functionality of furniture hardware and fittings checked and adjusted.</p>
2.6	Install glasses and mirrors	<p>2.6.1 Surface prepared for mounting glasses or mirrors.</p> <p>2.6.2 Fixing and joining materials prepared based on types of materials to be joined and surface to be covered with glasses or mirrors.</p> <p>2.6.3 Glasses or mirrors fixed in line and level using appropriate fixing method.</p> <p>2.6.4 Installed glasses and mirrors inspected for alignment and adjusted.</p>
2.7	Clean workplace	<p>2.7.1 Unused materials collected and stored in designated area.</p> <p>2.7.2 Surplus adhesives on laminates wiped.</p> <p>2.7.3 Tools and equipment cleaned and stored in designated area.</p> <p>2.7.4 Workplace cleaned neatly and waste disposed as per 3R's principle at designated area.</p>
6	<p>Task Performance Requirements (Tools, Equipment and Materials):</p> <ul style="list-style-type: none"> Measuring tape, marking gauge, ruler, pencil, pen, paper, sharpener, eraser, marker, combination square, sliding T bevel, try square, awl, saw, scraper, rasp, planer, mallet, hammer, nail punch, screwdriver, pincer, plier, chisel, wrench, phase tester, sharpening stone, file, saw set, 	



	<p>clamp, wedge, nail, screw, drill machine, drill bit set, sanding machine, power tools, masking tape, adhesive, laminate/mica, veneer, furniture hardware, furniture fittings, wire mesh, mirror, glass, listic, dust collector, dust pan, dust bin, broom, brush, air blower, workpiece, first aid kit and personal protective equipment.</p>
<p>7</p>	<p>Safety and Hygiene (Occupational Health and Safety):</p> <ul style="list-style-type: none"> • Use personal protective equipment. • Safe handling of materials, tools and equipment. • Hazards involved in handling cutting tools. • Isolate electric and fire hazards (tripping, electric shock, burns). • Hazards involved in lifting tools, equipment and materials. • Safe handling of debris.



8	Required Knowledge		
	Technical Knowledge	Applied Calculation	Graphical Information
	<ul style="list-style-type: none"> • Tools and equipment <ul style="list-style-type: none"> ○ Hand tools and power tools ○ Uses ○ Safe handling ○ Repair and maintenance • Wood types, uses and its properties • Market form of timber • Defects in timber • Market price and furniture trend • Wooden furniture <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Material types and preparation technique (Layout, Cutting, Clamping, Planning and gauging technique) ○ Types of joints and their uses ○ Furniture parts ○ Assembly sequence and fitting technique ○ Quality of materials and furniture product ○ Finishing works • Measurement system • Preparation and fixing techniques of furniture accessories 	<ul style="list-style-type: none"> • Convert metric unit to imperial and vice versa 	<ul style="list-style-type: none"> • Read and interpret drawing and specification • Read and interpret manufacturer's instruction



	<ul style="list-style-type: none"> • Preparation and fixing techniques of glasses and mirrors • Record keeping • Waste management • Occupational health and safety (OHS) • Use of first aid kit 		
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9	Assessment of Competency				
Unit: 2					
Unit Title: Fabricate wooden furniture products					
Candidate Details			Assessors Detail		
Candidate's Name:			Assessors' Name		ID/License No:
Registration Number:			1.		
Symbol No:			2.		
Test Centre:			3.		
Test Date:					
Element of competency	Performance Standards	Standard Met	Standard Not Met	Evidence Type	Comments
2.1 Prepare tools, equipment and materials	2.1.1 Personal Protective Equipment (PPE) used in accordance with task requirement.				
	2.1.2 Tools and equipment checked and prepared as per the task requirement.				
	2.1.3 Materials collected and checked for defects .				
	2.1.4 Tools, equipment and materials are arranged in workplace allowing enough space to work.				
2.2 Prepare furniture parts	2.2.1 Quality workpiece measured and cut to required angle and dimension.				
	2.2.2 Workpiece planned along the grain maintaining straightness, level and right angle.				



	<p>2.2.3 Joints prepared on workpiece according to drawing.</p> <p>2.2.4 Trail fitting performed and joints corrected to fit well and flushed.</p> <p>2.2.5 Prepared furniture parts labelled and stacked in designated area.</p>				
<p>2.3 Assemble furniture parts</p>	<p>2.3.1 Prepared furniture parts arranged for assembling.</p> <p>2.3.2 Furniture parts fitted and fastened in assembly sequence without damage.</p> <p>2.3.3 Assembled furniture product checked for compliance with drawing and specification.</p> <p>2.3.4 Twist, distortion, fittings and level adjusted as per requirement.</p>				
<p>2.4 Install laminating materials</p>	<p>2.4.1 Laminating surface prepared using surface preparation technique.</p> <p>2.4.2 Laminating materials cut to required dimension matching pattern and texture.</p> <p>2.4.3 Adhesives evenly applied to laminating surface and the back of laminating materials.</p> <p>2.4.4 Laminating materials pasted on required surface in matching pattern and texture.</p> <p>2.4.5 Laminated surface masked tightly and masking tape</p>				



	<p>removed once fully bonded.</p> <p>2.4.6 Laminated surface checked for peeling or air bubble and refixed.</p> <p>2.4.7 Excess laminate surface trimmed from edges in line and level without damage.</p>				
2.5 Install furniture accessories	<p>2.5.1 Furniture hardware, fastener and fittings selected as per drawing and specification and checked for smooth operation and damage.</p> <p>2.5.2 Housing prepared as per furniture hardware on furniture product in designated place.</p> <p>2.5.3 Surface drilled/bored as per furniture hardware.</p> <p>2.5.4 Furniture hardware fitted and fastened as per manufacturer's instruction.</p> <p>2.5.5 Functionality of furniture hardware and fittings checked and adjusted.</p>				
2.6 Install glasses and mirrors	<p>2.6.1 Surface prepared for mounting glasses or mirrors.</p> <p>2.6.2 Fixing and joining materials prepared based on types of materials to be joined and surface to be covered with glasses or mirrors.</p> <p>2.6.3 Glasses or mirrors fixed in line and level using appropriate fixing method.</p>				



	2.6.4 Installed glasses and mirrors inspected for alignment and adjusted.				
2.7 Clean workplace	2.7.1 Unused materials collected and stored in designated area. 2.7.2 Surplus adhesives on laminates wiped. 2.7.3 Tools and equipment cleaned and stored in designated area. 2.7.4 Workplace cleaned neatly and waste disposed as per 3R's principle at designated area.				

WT- Written Test

OQ- Oral Question

PT- Practical Test

DO – Direct Observation

SR- Supervisor’s report

SN–Simulation

RP- Role Play

PG –Photographs

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PP – Product Produced

CS – Case Study



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Range Statement

Variable	Range
Personal protective equipment	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Hair net • Apron • Goggles • Gloves • Safety shoes • Mask • Ear plug
Tools and equipment	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Power tools • Measuring tools • Marking tools • Cutting tools • Shaving tools • Clamping tools • Shaping tools • Drilling and boring tools • Striking and driving tools
Defects	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Cracks • Holes • Dents • Voids



	<ul style="list-style-type: none"> • Cavities • Scratches • Splits • Undulating portion/surface • Joints • Warping
Quality	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Straight • Knotless • Rotten free • Crack free • Seasoned • Sap free wood • Scatter less (Peel) • Free from shrinkage and swelling
Workpiece	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Wood/Timber • Ply wood • Block board • Veneer • Fiber board (MDF, HDF) • Particle board
Joints	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Butt joint • Lap joint • Dado joint • Tenon and mortise joint



	<ul style="list-style-type: none"> • Tongue and groove joint • Miter joint • Dove tail joint • Dowel joint • Finger and box joint • Rabbet joint
Furniture components and parts	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Leg • Toe kick • Rail • Brace • Frame • Top • Support • Shelves • Shutter • Panel • Trestle • Stretcher • Back • Bottom
Furniture products	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Table: Dressing table, console table, round/oval table, study table with bookcase, drop-leaf table • Cabinet: TV unit, shoe rack, kitchen cabinet, bar cabinet, filling cabinet • Wardrobe with sliding/rabbet shutter • Bed: Hydraulic bed, bunk bed • Chair: Upholstery chair, rocking chair, bar chair, dressing chair, folding chair



	<ul style="list-style-type: none"> • Chest of drawer
Surface preparation technique	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Nail punching • Heating/ironing • Puttying • Sanding • Planning • Filling • Cleaning
Laminating materials	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Mica/Laminate • Veneer
Furniture hardware, fastener and fittings	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Hinges • Lock • Handle • Tower bolt • Channel • Magnet catcher • Bracket • Hanging rod • Key hole cover • Dowel • Connector • Hydraulic bed lift • Drop leaf support • Nut bolt



<p>Appropriate fixing method</p>	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • By applying adhesive • By using listic • By screwing • By using magnetic catcher
<p>3R's principle</p>	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Reduce • Reuse • Recycle



5	Unit No: 3		Unit code:		
	Unit Title: Perform finishing of wooden furniture products				
	Elements of competency		Performance standards		
	3.1 Prepare tools, equipment and materials		3.1.1 Personal Protective Equipment (PPE) used in accordance with task requirement.		
			3.1.2 Tools, equipment and materials selected as per task requirement.		
3.2 Perform edge binding		3.1.3 Working condition of tools and equipment checked and fault tagged.			
		3.2.1 Lipping selected as per color and texture of laminate materials.			
		3.2.2 Lipping cut to size without damaging the edge.			
		3.2.3 Adhesives evenly applied to laminating surface and the back of lipping.			
		3.2.4 Lipping pasted at edge of furniture in matching patterns.			
3.3 Paint furniture product		3.2.5 Edges of the lipping masked tightly and removed masking tape once fully bonded.			
		3.2.6 Edges of lipping checked for peeling and refixed.			
		3.2.7 Edges trimmed in line and level without damage.			
		3.3.1 Surface preparing technique applied to create smooth and even surface for painting.			
		3.3.2 Surface not to be paint covered with masking materials .			
		3.3.3 Undercoat applied uniformly to achieve required level of finish.			
3.4 Polish furniture product		3.3.4 Entire surface sanded evenly and cleaned thoroughly.			
		3.3.5 Paint applied evenly and uniformly on furniture products with no visible brush stokes, bubbles and color variation.			
		3.3.6 Stains of paint wiped from unwanted surface.			
		3.4.1 Surface preparing technique applied to create smooth and even surface for polishing.			
3.4 Polish furniture product		3.4.2 Surface not to be polish covered with masking materials.			



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		<p>3.4.3 Filler applied uniformly to achieve required level of finish.</p> <p>3.4.4 Entire surface sanded evenly and cleaned thoroughly.</p> <p>3.4.1 Polish applied uniformly to achieve required level of opacity, finish and sheen.</p> <p>3.4.2 Stains of polish wiped from unwanted surface.</p>
	3.5 Clean workplace	<p>3.5.1 Unused materials collected and stored in designated area.</p> <p>3.5.2 Tools and equipment cleaned and stored in designated area.</p> <p>3.5.3 Workplace neatly cleaned and waste disposed as per 3R's principle at designated area.</p>
6	<p>Task Performance Requirements (Tools, Equipment and Materials):</p> <ul style="list-style-type: none"> Measuring tape, ruler, pencil, pen, paper, sharpener, eraser, scraper, marker, file, nail, nail punch, hammer, chisel, steel wool, chalk powder, color powder, shellac, lacquer, bowl, filler, wood primer, wood dust, enamel, color stain, sealer, varnish, adhesive, masking tape, drop cloth, putty knife, paint brush, roller, spray gun, water, cotton cloth, jute rag, sand paper, sanding machine, iron, scissors, turpentine oil, lipping materials, kerosene, spirit, thinner, dust collector, dust pan, dust bin, broom, brush, air blower, first aid kit and personal protective equipment. 	
7	<p>Safety and Hygiene (Occupational Health and Safety):</p> <ul style="list-style-type: none"> Use personal protective equipment. Safe handling of materials, tools and equipment. Hazards involved in handling tools and equipment. Hazards involved in toxic chemicals and wood. Isolate electric and fire hazards (tripping, electric shock, burns). Hazards involved in lifting tools, equipment and materials. Safe handling of debris. 	



8	Required Knowledge		
	Technical Knowledge	Applied Calculation	Graphical Information
	<ul style="list-style-type: none"> • Tools, equipment and materials <ul style="list-style-type: none"> ○ Types ○ Uses ○ Repair and maintenance ○ Safe handling • Finishing materials <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Quality • Lipping <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Use ○ Material and edge preparation • Adhesive <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Use • Measurement system • Condition of wooden surface • Surface preparation • Putty and filler <ul style="list-style-type: none"> ○ Introduction ○ Types and components ○ Mixing technique ○ Application • Wood primer <ul style="list-style-type: none"> ○ Introduction 	<ul style="list-style-type: none"> • Convert metric unit to imperial and vice versa 	<ul style="list-style-type: none"> • Read and interpret manufacturer's instruction • Read and interpret drawing and specification



	<ul style="list-style-type: none"> ○ Types ○ Thinning materials ○ Application ● Paint <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Materials preparation ○ Painting technique ○ Staining technique ● Polish <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Materials preparation ○ Polishing technique ○ Staining technique ● Stain of paint and polish removing technique ● Waste management ● Occupational health and safety (OHS) ● Use of first aid kit 		
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9	Assessment of Competency				
Unit: 3					
Unit Title: Perform finishing of wooden furniture products					
Candidate Details			Assessors Detail		
Candidate's Name:			Assessors' Name		ID/License No:
Registration Number:			1.		
Symbol No:			2.		
Test Centre:			3.		
Test Date:					
Element of competency	Performance Standards	Standard Met	Standard Not Met	Evidence Type	Comments
3.1 Prepare tools, equipment and materials	3.1.1 Personal Protective Equipment (PPE) used in accordance with task requirement.				
	3.1.2 Tools, equipment and materials selected as per task requirement.				
	3.1.3 Working condition of tools and equipment checked and fault tagged.				
3.2 Perform edge binding	3.2.1 Lipping selected as per color and texture of laminate materials.				
	3.2.2 Lipping cut to size without damaging the edge.				
	3.2.3 Adhesives evenly applied to laminating surface and the back of lipping.				



	<p>3.2.4 Lipping pasted at edge of furniture in matching patterns.</p> <p>3.2.5 Edges of the lipping masked tightly and removed masking tape once fully bonded.</p> <p>3.2.6 Edges of lipping checked for peeling and refixed.</p> <p>3.2.7 Edges trimmed in line and level without damage.</p>				
<p>3.3 Paint furniture product</p>	<p>3.3.1 Surface preparing technique applied to create smooth and even surface for painting.</p> <p>3.3.2 Surface not to be paint covered with masking materials.</p> <p>3.3.3 Undercoat applied uniformly to achieve required level of finish.</p> <p>3.3.4 Entire surface sanded evenly and cleaned thoroughly.</p> <p>3.3.5 Paint applied evenly and uniformly on furniture products with no visible brush stokes, bubbles and color variation.</p> <p>3.3.6 Stains of paint wiped from unwanted surface.</p>				
<p>3.4 Polish furniture product</p>	<p>3.4.1 Surface preparing technique applied to create smooth and even surface for polishing.</p> <p>3.4.2 Surface not to be polish covered with masking materials.</p> <p>3.4.3 Filler applied uniformly to achieve required level of finish.</p> <p>3.4.4 Entire surface sanded evenly and cleaned thoroughly.</p> <p>3.4.3 Polish applied uniformly to achieve required level of opacity, finish and sheen.</p>				



	3.4.4 Stains of polish wiped from unwanted surface.				
3.5 Clean workplace	3.5.1 Unused materials collected and stored in designated area. 3.5.2 Tools and equipment cleaned and stored in designated area. 3.5.3 Workplace neatly cleaned and waste disposed as per 3R's principle at designated area.				

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Range Statement

Variable	Range
Personal protective equipment	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Helmet • Hair net • Apron • Goggles • Gloves • Safety shoes • Mask • Ear plug
Lipping	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • PVC • Wooden • Mica/laminate • Veneer
Surface preparation technique	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Nail punching • Heating/ironing • Puttying • Sanding • Planning • Filling • Cleaning



Masking materials	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Masking tape • Masking paper • Plastic sheet
Undercoat	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Primer • Stain • Filler
Polish	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • French polish • Varnish • Sealer • Lacquer
3R's principle	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Reduce • Reuse • Recycle



5	Unit No: 4		Unit code:	
	Unit Title: Repair and modify wooden furniture products			
	Elements of competency		Performance standards	
	4.1 Assess damage in furniture products		4.1.1 Furniture products inspected visually for <i>defects</i> . 4.1.2 Functionality of furniture products checked. 4.1.3 Furniture defects identified and recorded. 4.1.4 Customer requirement noted and suggestion provided based on condition of furniture. 4.1.5 Cost of repair estimated and shared with clients.	
4.2 Repair furniture product		4.2.1 Personal Protective Equipment (PPE) used in accordance with task requirement. 4.2.2 Tools, equipment and materials prepared as per type of damage. 4.2.3 Damaged portion prepared based on furniture defects and client's requirement. 4.2.4 Furniture defects repaired by strengthening or replacing by maintaining originality. 4.2.5 Furniture surface prepared for painting and paint applied uniformly to achieve required color. 4.2.6 Furniture surface prepared for polishing and polish applied uniformly to achieve required level of opacity, finish and sheen. 4.2.7 Refinished furniture checked for alignment, fitting, stability, paint and polish.		
4.3 Modify furniture product		4.3.1 Modification details collected from clients. 4.3.2 Surface prepared based on modification details. 4.3.3 Design modified based on client's requirement. 4.3.4 Laminating materials pasted on required surface in matching pattern and texture. 4.3.5 Finishing materials applied evenly and uniformly to achieve required level of opacity,		



		finish and sheen.
		4.3.6 Modified furniture checked for alignment, fitting, stability, paint and polish.
4.4	Clean workplace	4.4.1 Unused materials collected and stored in designated area. 4.4.2 Tools and equipment cleaned and stored in designated area. 4.4.3 Workplace neatly cleaned and waste disposed as per 3R's principle at designated area.
6	Task Performance Requirements (Tools, Equipment and Materials): <ul style="list-style-type: none"> Ruler, pencil, pen, paper, sharpener, eraser, measuring tape, scraper, file, nail punch, marking gauge, combination square, try square, awl, saw, planer, mallet, hammer, sharpening stone, nail, screw, chisel, screw driver, plier, sand paper, steel wool, furniture accessories, laminating materials, laminate cutter, chalk powder, color powder, shellac, bowl, wood primer, wood dust, enamel, color stain, sealer, varnish, masking tape, adhesive, drill machine, drill bit set, putty knife, paint brush, roller, spray gun, water, cotton cloth, jute rag, sanding machine, iron, heat gun, scissors, turpentine oil, kerosene, spirit, thinner, dust collector, dust pan, dust bin, broom, brush, air blower, first aid kit and personal protective equipment. 	
7	Safety and Hygiene (Occupational Health and Safety): <ul style="list-style-type: none"> Use personal protective equipment. Safe handling of materials, tools and equipment. Hazards involved in handling tools and equipment. Hazards involved in toxic chemicals and wood. Isolate electric and fire hazards (tripping, electric shock, burns). Hazards involved in lifting tools, equipment and materials. Safe handling of debris. 	



8	Required Knowledge		
	Technical Knowledge	Applied Calculation	Graphical Information
	<ul style="list-style-type: none"> • Tools, equipment and materials <ul style="list-style-type: none"> ○ Types ○ Uses ○ Safe handling • Measurement system • Furniture repair <ul style="list-style-type: none"> ○ Introduction ○ Types of furniture defects ○ Method and technique • Assessing damage/defects • Repairing furniture products • Restoration and modification of furniture • Laminating materials and techniques • Painting and polishing • Costing and estimation • Record keeping • Waste management • Occupational health and safety (OHS) • Use of first aid kit 	<ul style="list-style-type: none"> • Convert metric unit to imperial and vice versa • Calculate cost of repair and modification 	<ul style="list-style-type: none"> • Read and interpret manufacturer's instruction



9	Assessment of Competency				
Unit: 4					
Unit Title: Repair and modify wooden furniture products					
Candidate Details			Assessors Detail		
Candidate's Name:			Assessors' Name		ID/License No:
Registration Number:			1.		
Symbol No:			2.		
Test Centre:			3.		
Test Date:					
Element of competency	Performance Standards	Standard Met	Standard Not Met	Evidence Type	Comments
4.1 Assess damage in furniture products	4.1.1 Furniture products inspected visually for <i>defects</i> .				
	4.1.2 Functionality of furniture products checked.				
	4.1.3 Furniture defects identified and recorded.				
	4.1.4 Customer requirement noted and suggestion provided based on condition of furniture.				
	4.1.5 Cost of repair estimated and shared with clients.				
4.2 Repair furniture product	4.2.1 Personal Protective Equipment (PPE) used in accordance with task requirement.				
	4.2.2 Tools, equipment and materials prepared as per type of damage.				
	4.2.3 Damaged portion prepared based on furniture defects and				



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	<p>client's requirement.</p> <p>4.2.4 Furniture defects repaired by strengthening or replacing by maintaining originality.</p> <p>4.2.5 Furniture surface prepared for painting and paint applied uniformly to achieve required color.</p> <p>4.2.6 Furniture surface prepared for polishing and polish applied uniformly to achieve required level of opacity, finish and sheen.</p> <p>4.2.7 Refinished furniture checked for alignment, fitting, stability, paint and polish.</p>				
<p>4.3 Modify furniture product</p>	<p>4.3.1 Modification details collected from clients.</p> <p>4.3.2 Surface prepared based on modification details.</p> <p>4.3.3 Design modified based on client's requirement.</p> <p>4.3.4 Laminating materials pasted on required surface in matching pattern and texture.</p> <p>4.3.5 Finishing materials applied evenly and uniformly to achieve required level of opacity, finish and sheen.</p> <p>4.3.6 Modified furniture checked for alignment, fitting, stability, paint and polish.</p>				
<p>4.4 Clean workplace</p>	<p>4.4.1 Unused materials collected and stored in designated area.</p> <p>4.4.2 Tools and equipment cleaned and stored in designated</p>				



	area.				
	4.3.1 Workplace neatly cleaned and waste disposed as per 3R's principle at designated area.				

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Range Statement

Variable	Range
Defects	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Cracks, patches and scratches • Twist/warp • Joints problems • Structural damage • Problems with furniture accessories • Fading/discoloration
Personal Protective Equipment	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Helmet • Hair net • Apron/Safety Jacket • Goggles • Gloves • Safety shoes • Mask • Ear plug
Modification details	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Adding new parts and features • Changing style and design • Changing laminating materials • Changing finishing materials



3R's principle	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none">• Reduce• Reuse• Recycle
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