

National Occupational Skill Standard (NOSS)

Occupational Title : Furniture Maker

Level : 2

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: 12-03-2023 (28-11-2079)

The Occupational Skill Standard Developed By:

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Approve by the tripartite National Skill Testing Board.

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The National Occupational Skill Standard Developed by:

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Recommended by Construction Technical Sub Committee: 12 March 2023 (28 Falgun 2079)



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1	Occupational Title: Furniture Maker Level: 2
2	Job Description: Furniture Maker, L-2, prepares box type wooden furniture products, laminates wooden furniture products, installs furniture accessories, paints and polishes wooden furniture products and repairs wooden furniture products.
	UNITS OF COMPETENCY: <ol style="list-style-type: none"> 1. Prepare box type wooden furniture products 2. Laminate wooden furniture products 3. Install furniture accessories 4. Paint and polish wooden furniture products 5. Repair wooden furniture products 6. Perform communication 7. Develop professionalism <p>*Note: Units 6 and 7 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: 12 to 14 Hours (Full competency) • Recommended Group Size: 6 to 8 Candidates



5	Unit No:1		Unit code:	
	Unit Title: Prepare box type wooden furniture products			
	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 using appropriate method .
		1.1.3 Tools, equipment and materials arranged in workplace allowing enough space to work.		
1.2 Prepare furniture components and parts	1.2.1 Quality workpiece measured and cut to required angle and dimension.	1.2.2 Workpiece planned along the grain maintaining straightness, level and right angle.	1.2.3 Joints prepared on workpiece according to drawing.	
	1.2.4 Trail fitting performed and joints corrected to fit well and flushed.	1.2.5 Prepared furniture components and parts stacked in designated area.		
1.3 Assemble components and parts	1.3.1 Prepared furniture components and parts arranged for assembling.	1.3.2 Furniture components and parts fitted and fastened in assembly sequence maintaining straightness, plumbness, level and squareness.	1.3.3 Assembled product checked for compliance with drawing and specification.	
	1.3.4 Twist, distortion, fittings and level adjusted as per requirement.	1.3.5 Furniture products stored in designated area.		
1.4 Clean workplace	1.4.1 Unused materials are collected and stored in designated area.	1.4.2 Tools and equipment are cleaned, checked for damage and stored in designated area.	1.4.3 Workplace is cleaned neatly and waste disposed as per 3R's principle at designated area.	



6	<p>Task Performance Requirements (Tools, Equipment and Materials):</p> <ul style="list-style-type: none"> Measuring tape, ruler pencil, pen, paper, sharpener, eraser, marker, try square, combination square, awl, marking gauge, sliding T bevel, saws, planer, chisels, hammer, mallet, pincer, pliers, nail punch, wood rasp, scraper, screwdriver, wrench, sharpening stone, file, saw set, clamp, power tools, wedge, nail, screw, masking tape, adhesive, drill bit set, spirit, sanding machine, kerosene, thinner, rag, dust collector, dust pan, dust bin, broom, brush, air blower, workpiece, 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 sharpening 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 • Wood types, uses and its properties • Market form of timber • Defects in timber • Wooden furniture <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Technical drawing and design ○ Components and parts ○ Material types and preparation technique ○ Assembly sequence and fitting technique ○ Quality of materials and furniture product ○ Finishing works ○ Costing and estimation • Measurement system • Types of joints and their uses 	<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



	<ul style="list-style-type: none"> • Preparation of workpiece <ul style="list-style-type: none"> ○ Layout technique ○ Cutting technique ○ Clamping technique ○ Planning and gauging technique • Stacking technique • Record keeping • Waste management • Occupational health and safety (OHS) • Use of first aid kit 		
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9	Assessment of Competency				
Unit: 1					
Unit Title: Prepare box type 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 the task requirement using appropriate method.				
	1.1.3 Tools, equipment and materials arranged in workplace allowing enough space to work.				
1.2 Prepare furniture components and parts	1.2.1 Quality workpiece measured and cut to required angle and dimension.				
	1.2.2 Workpiece planned along the grain maintaining straightness, level and right angle.				
	1.2.3 Joints prepared on workpiece according to drawing.				



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	<p>1.2.4 Trail fitting performed and joints corrected to fit well and flushed.</p> <p>1.2.5 Prepared furniture components and parts stacked in designated area.</p>				
1.3 Assemble components and parts	<p>1.3.1 Prepared furniture components and parts arranged for assembling.</p> <p>1.3.2 Furniture components and parts fitted and fastened in assembly sequence maintaining straightness, plumbness, level and squareness.</p> <p>1.3.3 Assembled product checked for compliance with drawing and specification.</p> <p>1.3.4 Twist, distortion, fittings and level adjusted as per requirement.</p> <p>1.3.5 Furniture products stored in designated area.</p>				
1.4 Clean workplace	<p>1.4.1 Unused materials are collected and stored in designated area.</p> <p>1.4.2 Tools and equipment are cleaned, checked for damage and stored in designated area.</p> <p>1.4.3 Workplace is cleaned neatly and waste disposed as per 3R's principle at designated area.</p>				



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
Tools and equipment	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Portable power tools • Measuring tools • Marking tools • Cutting tools • Shaving tools • Clamping tools • Shaping tools • Drilling and boring tools • Striking and driving tools
Appropriate method	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Removing dust, debris, rust • Cleaning • Sharpening



	<ul style="list-style-type: none"> • Lubricating • Setting/adjusting
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 • Teak ply • Fiber board (MDF, HDF)
Joints	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Lap joint • Dado joint • Tenon and mortise joint • Tongue and groove joint • Miter joint • Dove tail joint • Rabbet joint • Butt joint



<p>Furniture components and parts</p>	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Leg • Toe kick • Rail • Trestle • Brace • Stretcher • Frame • Top • Support • Shelves • Shutter • Panel • Back • Bottom
<p>Furniture products</p>	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Table: Dining table, side table, coffee/centre table, study table, office table, computer table • Cabinet: Book shelves, crockery rack, show case • Wardrobe with two panel shutters • Bed, cot, box bed • Chair • Bar stool • Chest
<p>3R's principle</p>	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Reduce • Reuse



	<ul style="list-style-type: none">• Recycle
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5	Unit No: 2		Unit code:	
	Unit Title: Laminate 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, equipment and materials selected and collected as per task requirement. 2.1.3 Working condition of tools and equipment checked and fault tagged.		
2.2 Prepare surface	2.2.1 Laminating surface checked for defects . 2.2.2 Defects rectified using appropriate surface preparation technique . 2.2.3 Foreign materials on laminating surface wiped and waste disposed at designated area. 2.2.4 Adhesives applied evenly on laminating surface as per manufacturer's instruction.			
2.3 Apply laminating materials	2.3.1 Laminating materials selected and checked for defects. 2.3.2 Laminating materials measured, marked and cut to required dimension matching pattern and texture without damage. 2.3.3 Adhesives applied evenly at the back covering entire surface as per manufacturer's instruction. 2.3.4 Laminating materials pasted on required surface in matching pattern and texture as per drawing. 2.3.5 Laminated surface masked/clamped tightly. 2.3.6 Masking tape/nails removed and disposed safely. 2.3.7 Laminated surface checked for peeling or air bubble and refixed. 2.3.8 Excess laminate from the edges trimmed in line and level without damage.			



	2.4 Perform edge binding	<p>2.4.1 Lipping selected as per color and texture of laminate materials.</p> <p>2.4.2 Lipping measured, marked and cut to size without damaging the edge.</p> <p>2.4.3 Adhesives applied evenly at the back as per manufacturer’s instruction.</p> <p>2.4.4 Lipping pasted at edge of furniture in matching patterns.</p> <p>2.4.5 Edges of the lipping masked tightly.</p> <p>2.4.6 Masking tape removed and disposed safely.</p> <p>2.4.7 Edges of lipping checked for peeling and refixed.</p> <p>2.4.8 Excess lipping from the edges trimmed in line and level without damage.</p>
	2.5 Clean workplace	<p>2.5.1 Unused materials collected and stored in designated area.</p> <p>2.5.2 Surplus adhesives on laminates and lipping wiped.</p> <p>2.5.3 Tools and equipment cleaned and stored in designated area</p> <p>2.5.4 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, ruler, pencil, pen, paper, eraser, marker, try square, combination square, hammer, mallet, scraper, nail punch, sharpener, awl, laminate cutter, block plane, smooth plane, screwdriver, pincer, plier, chisel, sharpening stone, file, clamp, nail, masking tape, adhesive, laminate/mica, veneer, lipping, kerosene, spirit, thinner, cloth, 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):

- 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.



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8	Required Knowledge		
	Technical Knowledge	Applied Calculation	Graphical Information
	<ul style="list-style-type: none"> • Tools and equipment <ul style="list-style-type: none"> ○ Types ○ Uses ○ Safe handling • Mica/Laminate and Veneer <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Use ○ Surface and material preparation • Lipping <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Use ○ Material and edge preparation • Adhesive <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Use • 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 	<ul style="list-style-type: none"> • Read and interpret drawing and specification • Read and interpret manufacturer's instruction



9	Assessment of Competency				
Unit: 2					
Unit Title: Laminate 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, equipment and materials selected and collected as per task requirement.				
	2.1.3 Working condition of tools and equipment checked and fault tagged.				
2.2 Prepare surface	2.2.1 Laminating surface checked for defects .				
	2.2.2 Defects rectified using appropriate surface preparation technique .				
	2.2.3 Foreign materials on laminating surface wiped and waste disposed at designated area.				



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	2.2.4 Adhesives applied evenly on laminating surface as per manufacturer's instruction.				
2.3 Apply laminating materials	<p>2.3.1 Laminating materials selected and checked for defects.</p> <p>2.3.2 Laminating materials measured, marked and cut to required dimension matching pattern and texture without damage.</p> <p>2.3.3 Adhesives applied evenly at the back covering entire surface as per manufacturer's instruction.</p> <p>2.3.4 Laminating materials pasted on required surface in matching pattern and texture as per drawing.</p> <p>2.3.5 Laminated surface masked/clamped tightly.</p> <p>2.3.6 Masking tape/nails removed and disposed safely.</p> <p>2.3.7 Laminated surface checked for peeling or air bubble and refixed.</p> <p>2.3.8 Excess laminate from the edges trimmed in line and level without damage.</p>				
2.4 Perform edge binding	<p>2.4.1 Lipping selected as per color and texture of laminate materials.</p> <p>2.4.2 Lipping measured, marked and cut to size without damaging the edge.</p> <p>2.4.3 Adhesives applied evenly at the back as per manufacturer's</p>				



	<p>instruction.</p> <p>2.4.4 Lipping pasted at edge of furniture in matching patterns.</p> <p>2.4.5 Edges of the lipping masked tightly.</p> <p>2.4.6 Masking tape removed and disposed safely.</p> <p>2.4.7 Edges of lipping checked for peeling and refixed.</p> <p>2.4.8 Excess lipping from the edges trimmed in line and level without damage.</p>				
2.5 Clean workplace	<p>2.5.1 Unused materials collected and stored in designated area.</p> <p>2.5.2 Surplus adhesives on laminates and lipping wiped.</p> <p>2.5.3 Tools and equipment cleaned and stored in designated area</p> <p>2.5.4 Workplace cleaned neatly and waste disposed as per 3R's principle at designated area.</p>				

WT- Written Test

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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
Defects	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Cracks • Holes • Dents • Voids • Cavities • Scratches • Splits • Undulating portion/surface • Joints • Warp • Twist
Surface preparation technique	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Heating/ironing • Sanding



	<ul style="list-style-type: none"> • Planning • Filling
Foreign materials	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Nails • Screws • Wooden pieces • Excess adhesives • Grease • Dust • Chips • Stains
Laminating materials	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Mica/laminate • Veneer
Lipping	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • PVC • Wooden • Mica/laminate • Veneer • MDF
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: 3		Unit code:		
	Unit Title: Install furniture accessories				
	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 Install furniture hardware, fastener and fittings		3.1.3 Working condition of tools and equipment checked and fault tagged.			
		3.2.1 Furniture hardware, fastener and fittings selected as per drawing and specification and checked for smooth operation and damage.			
		3.2.2 Housing prepared as per furniture hardware on furniture product in designated place.			
		3.2.3 Surface drilled/bored as per furniture hardware.			
		3.2.4 Furniture hardware fitted and fastened as per manufacturer’s instruction.			
3.3 Install glasses and mirrors		3.2.5 Functionality of furniture hardware and fittings checked and adjusted.			
		3.3.1 Glasses and mirrors required identified from drawing.			
		3.3.2 Surface prepared for mounting glasses or mirrors.			
		3.3.3 Fixing and joining materials prepared based on types of materials to be joined and surface to be covered with glasses or mirrors.			
		3.3.4 Glasses or mirrors fixed in line and level using appropriate fixing method.			
3.4 Install wire mesh		3.3.5 Installed glasses and mirrors inspected for alignment and adjusted.			
		3.4.1 Wire mesh and listic frame prepared to required dimension as per drawing.			
		3.4.2 Wire mesh fixed in designated area.			
		3.4.3 Listic frame fixed and fastened around the wire mesh.			
		3.4.4 Excess wire mesh trimmed in line and level.			



	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, eraser, marker, try square, scraper, nail punch, sharpener, awl, sliding T bevel, saws, planers, mallet, hammer, snipper, screwdriver, wrench, pincer, plier, chisel, sharpening stone, file, nail, screw, masking tape, adhesive, drill machine, drill bit set, furniture hardware, furniture fittings, wire mesh, mirror, glass, listic, kerosene, spirit, thinner, cloth, 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 ○ Safe handling • Furniture hardware, fastener and fittings <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Uses ○ Preparation and fixing techniques • Glass and mirror <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Uses ○ Preparation and fixing techniques • Wire mesh <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Uses ○ Preparation and fixing techniques • Measurement system • 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 	<ul style="list-style-type: none"> • Read and interpret manufacturer's instruction • Read and interpret drawing and specification



9	Assessment of Competency				
Unit: 3					
Unit Title: Install furniture accessories					
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 Install furniture hardware, fastener and fittings	3.2.1 Furniture hardware, fastener and fittings selected as per drawing and specification and checked for smooth operation and damage.				
	3.2.2 Housing prepared as per furniture hardware on furniture product in designated place.				



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	<p>3.2.3 Surface drilled/bored as per furniture hardware.</p> <p>3.2.4 Furniture hardware fitted and fastened as per manufacturer's instruction.</p> <p>3.2.5 Functionality of furniture hardware and fittings checked and adjusted.</p>				
3.3 Install glasses and mirrors	<p>3.3.1 Glasses and mirrors required identified from drawing.</p> <p>3.3.2 Surface prepared for mounting glasses or mirrors.</p> <p>3.3.3 Fixing and joining materials prepared based on types of materials to be joined and surface to be covered with glasses or mirrors.</p> <p>3.3.4 Glasses or mirrors fixed in line and level using appropriate fixing method.</p> <p>3.3.5 Installed glasses and mirrors inspected for alignment and adjusted.</p>				
3.4 Install wire mesh	<p>3.4.1 Wire mesh and listic frame prepared to required dimension as per drawing.</p> <p>3.4.2 Wire mesh fixed in designated area.</p> <p>3.4.3 Listic frame fixed and fastened around the wire mesh.</p> <p>3.4.4 Excess wire mesh trimmed in line and level.</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</p>				



	area.				
	3.5.3 Workplace neatly cleaned 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

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PG –Photographs

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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 • Goggles • Gloves • Safety shoes • Mask • Ear plug
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 • Nut bolt
Appropriate fixing method	<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 magnet catcher • By using metal bracket
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: Paint and polish wooden furniture products				
	Elements of competency		Performance standards		
	4.1 Prepare tools, equipment and materials		4.1.1 Personal Protective Equipment (PPE) used in accordance with task requirement.		
			4.1.2 Tools, equipment and materials selected and collected as per task requirement.		
4.2 Prepare surface of furniture product		4.1.3 Working condition of tools and equipment checked and fault tagged.			
		4.2.1 Exposed nail heads and pins punched slightly below the surface without damaging the surrounding surface.			
		4.2.2 foreign materials removed from surface and cleaned thoroughly.			
4.3 Apply undercoat		4.2.3 Putty prepared matching wooden color to require amount and filled uniformly on defects .			
		4.2.4 Excess putty removed after complete dryness and surface sanded along the grains until smoothed.			
4.4 Paint furniture product		4.2.5 Sanded surface wiped and dust removed.			
		4.3.1 Protective material laid below furniture products before applying undercoat .			
		4.3.2 Wood primer mixed to specified ratio as per manufacturer's instruction.			
4.3 Apply undercoat		4.3.3 Filler and wood stain prepared matching wooden color to required amount.			
		4.3.4 Undercoat applied uniformly to achieve required level of opacity and finish.			
4.4 Paint furniture product		4.3.5 Entire surface sanded evenly and dust removed thoroughly.			
		4.4.1 Surface not to be paint covered with masking materials .			
		4.4.2 Enamel paint mixed to specified ratio as per manufacturer's instruction.			
4.4 Paint furniture product		4.4.3 Enamel paint applied uniformly to achieve required level of opacity, finish and sheen.			



		4.4.4 Stains of paint wiped from unwanted surface.
	4.5 Polish furniture product	4.5.1 Surface not to be polish covered with masking materials. 4.5.2 Polish prepared to specified ratio as per manufacturer's instruction. 4.5.3 Polish applied uniformly to achieve required level of opacity, finish and sheen. 4.5.4 Stains of polish wiped from unwanted surface .
	4.6 Clean workplace	4.6.1 Unused materials collected and stored in designated area. 4.6.2 Tools and equipment cleaned and stored in designated area. 4.6.3 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, scraper, file, nail punch, hammer, chisel, steel wool, chalk powder, color powder, shellac, lacquer, bowl, filler, wood primer, wood dust, enamel, color stain, sealer, varnish, turpentine oil ,kerosene, water, thinner, spirit, adhesive, masking tape, drop cloth, putty knife, paint brush, roller, spray gun, cotton cloth, jute rag, sand paper, sanding machine, iron, scissors, 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 • Types of wood • Wooden surface preparation • Types of finishes (Varnish, lacquer, wax) • 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 ○ Types ○ Thinning materials ○ Application • Paint <ul style="list-style-type: none"> ○ Introduction ○ Types ○ Materials preparation 	<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



	<ul style="list-style-type: none"> ○ 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: 4						
Unit Title: Paint and polish 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 Prepare tools, equipment and materials	4.1.1 Personal Protective Equipment (PPE) used in accordance with task requirement.					
	4.1.2 Tools, equipment and materials selected and collected as per task requirement.					
	4.1.3 Working condition of tools and equipment checked and fault tagged.					
4.2 Prepare surface of furniture product	4.2.1 Exposed nail heads and pins punched slightly below the surface without damaging the surrounding surface.					
	4.2.2 foreign materials removed from surface and cleaned thoroughly.					
	4.2.3 Putty prepared matching wooden color to require amount					



	<p>and filled uniformly on defects.</p> <p>4.2.4 Excess putty removed after complete dryness and surface sanded along the grains until smoothed.</p> <p>4.2.5 Sanded surface wiped and dust removed.</p>				
4.3 Apply undercoat	<p>4.3.1 Protective material laid below furniture products before applying undercoat.</p> <p>4.3.2 Wood primer mixed to specified ratio as per manufacturer's instruction.</p> <p>4.3.3 Filler and wood stain prepared matching wooden color to required amount.</p> <p>4.3.4 Undercoat applied uniformly to achieve required level of opacity and finish.</p> <p>4.3.5 Entire surface sanded evenly and dust removed thoroughly.</p>				
4.4 Paint furniture product	<p>4.4.1 Surface not to be paint covered with masking materials.</p> <p>4.4.2 Enamel paint mixed to specified ratio as per manufacturer's instruction.</p> <p>4.4.3 Enamel paint applied uniformly to achieve required level of opacity, finish and sheen.</p> <p>4.4.4 Stains of paint wiped from unwanted surface.</p>				



4.5 Polish furniture product	<p>4.5.1 Surface not to be polish covered with masking materials.</p> <p>4.5.2 Polish prepared to specified ratio as per manufacturer's instruction.</p> <p>4.5.3 Polish applied uniformly to achieve required level of opacity, finish and sheen.</p> <p>4.5.4 Stains of polish wiped from <i>unwanted surface</i>.</p>				
4.6 Clean workplace	<p>4.6.1 Unused materials collected and stored in designated area.</p> <p>4.6.2 Tools and equipment cleaned and stored in designated area.</p> <p>4.6.3 Workplace neatly cleaned and waste disposed as per <i>3R's principle</i> at designated area.</p>				

WT- Written Test

OQ- Oral Question

PT- Practical Test

DO – Direct Observation

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SN–Simulation

RP- Role Play

PG –Photographs

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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
Foreign materials	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Nails • Screws • Wooden pieces • Excess adhesives • Grease • Dust • Chips • Stains
Defects	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Cracks • Holes • Dents • Voids • Cavities



	<ul style="list-style-type: none"> • Scratches • Splits • Undulating portion/surface • Joints
Protective material	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Plastic sheet • Tarpaulin • Drop cloth
Undercoat	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Wood primer • Filler • Surfacer • Wood stain
Masking materials	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Masking tape • Masking paper • Plastic sheet
Unwanted surface	<p><i>May include but not limited to:</i></p> <ul style="list-style-type: none"> • Brick surface • Cement surface • Tile, marble and granite surface • Wooden surface • Furniture accessories



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: 5		Unit code:	
	Unit Title: Repair wooden furniture products			
	Elements of competency	Performance standards		
	5.1 Assess damage in furniture products	5.1.1 Furniture products inspected visually for <i>defects</i> . 5.1.2 Functionality of furniture products checked. 5.1.3 Furniture defects identified and recorded. 5.1.4 Customer requirement noted and suggestion provided based on condition of furniture.		
5.2 Rectify furniture product	5.2.1 Personal Protective Equipment (PPE) used in accordance with task requirement. 5.2.2 Tools, equipment and materials prepared as per type of damage. 5.2.3 Damaged portion prepared based on furniture defects and customer requirement. 5.2.4 Furniture defects repaired by strengthening or replacing by maintaining originality. 5.2.5 Furniture surface prepared for painting and paint applied uniformly to achieve required color. 5.2.6 Furniture surface prepared for polishing and polish applied uniformly to achieve required level of opacity, finish and sheen. 5.2.7 Refinished furniture checked for alignment, fitting, stability, paint and polish.			
5.3 Clean workplace	5.3.1 Unused materials collected and stored in designated area. 5.3.2 Tools and equipment cleaned and stored in designated area. 5.3.3 Workplace neatly cleaned and waste disposed as per 3R's principle at designated area.			



6	<p>Task Performance Requirements (Tools, Equipment and Materials):</p> <ul style="list-style-type: none"> Ruler, pencil, pen, paper, sharpener, eraser, measuring tape, try square, combination square, marking gauge, scraper, sliding T bevel, file, nail punch, 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, lacquer, varnish, masking tape, adhesive, drill machine, drill bit set, putty knife, paint brush, roller, 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	<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 ○ Safe handling • Measurement system • Wooden surface preparation • Laminating materials and techniques • Painting and polishing • Repairing furniture products <ul style="list-style-type: none"> ○ Assessing damage/defects ○ Common furniture defects ○ Repairing scratches and cracks ○ Fixing loose joints ○ Fixing furniture accessories ○ Fixing structural problems ○ Restoring the finish (paint and polish) • Record keeping • Waste management • Occupational health and safety (OHS) • Use of first aid kit 	<ul style="list-style-type: none"> • Convert imperial to metric and vice versa 	<ul style="list-style-type: none"> • Read and interpret drawing/sketch • Read and interpret manufacturer's instruction



9	Assessment of Competency				
Unit: 5 Unit Title: Repair 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
5.1 Assess damage in furniture products	5.1.1 Furniture products inspected visually for <i>defects</i> .				
	5.1.2 Functionality of furniture products checked.				
	5.1.3 Furniture defects identified and recorded.				
	5.1.4 Customer requirement noted and suggestion provided based on condition of furniture.				
5.2 Rectify furniture product	5.2.1 Personal Protective Equipment (PPE) used in accordance with task requirement.				
	5.2.2 Tools, equipment and materials prepared as per type of damage.				
	5.2.3 Damaged portion prepared based on furniture defects and customer requirement.				



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	<p>5.2.4 Furniture defects repaired by strengthening or replacing by maintaining originality.</p> <p>5.2.5 Furniture surface prepared for painting and paint applied uniformly to achieve required color.</p> <p>5.2.6 Furniture surface prepared for polishing and polish applied uniformly to achieve required level of opacity, finish and sheen.</p> <p>5.2.7 Refinished furniture checked for alignment, fitting, stability, paint and polish.</p>				
5.3 Clean workplace	<p>5.3.1 Unused materials collected and stored in designated area.</p> <p>5.3.2 Tools and equipment cleaned and stored in designated area.</p> <p>5.3.3 Workplace neatly cleaned and waste disposed as per 3R's principle at designated area.</p>				

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

