FURNITURE TECHNICIAN

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ASSESSMENT PACKAGE

National Vocational Certificate Level 4

Version 1 - May, 2019

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National Vocational Certificate Level 4

Version 1 - May, 2019

Title of Qualification: National Vocational Certificate Level 4 in Furniture Technician (Carpenter)	CS Code:	Level: 04	Version: 01
Competency Standard Title: Apply surface aesthetics using CNC Machines Maintain Safe Work Environment	**Assessment Date (DD/MM/YY):**		

Candidate Details	Name: .... Registration/Roll Number: ....
Guidance for Candidate	**To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):** 1. **Assessment Task 1:** Maintain health & safety during the assessment tasks assigned by the assessor 2. **Assessment Task 2:** Perform Turning of components on CNC Turning Centre as per task/instruction given by assessor 3. **Assessment Task 3:** Perform Carving on CNC Machining Centre as per task/instructions given by assessor 4. **Assessment Task 4:** Perform Marquetry/Parquetry on CNC Laser Machine as per job nature assigned by assessor **And complete:** 5. **Knowledge assessment test (Written)** 6. **Portfolios at the time of assessment (if any)**
	During a practical assessment, under observation by an assessor, you will complete: **Assessment Task 1** Performance Criteria 1: Properly wear Personal Protective Equipment appropriate to the risks at workplace Performance Criteria 2: Keep work area clean and clear of obstructions to prevent potential accident or injury
Minimum Evidence Required	**Assessment Task 2** Performance Criteria 1: Equip CNC Turning Centre with required tools Performance Criteria 2: Align work piece on the machine Performance Criteria 3: Execute machine program from control panel for required operation
	Assessment Task 3 Performance Criteria 1: Equip CNC Machining Centre with required tools (Bits, profile cutters etc.) Performance Criteria 2: Align work piece on the machine Performance Criteria 3: Execute machine program from control panel for required operation
	Assessment Task 4 Performance Criteria 1: Align multiple veneer sheets as per machine capacity Performance Criteria 2: Execute machine program from control panel for required operation

	Portfolios required at the time of assessment (if any) for Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for surface aesthetics on objects using CNC lathe Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for surface aesthetics on objects using CNC machining centre Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for surface aesthetics on objects using CNC laser

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: .... Registration/Roll Number: .... Candidate Signature:................................... ....
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Name of the Assessor: .... Assessor's code: .... Signature of the Assessor:................................... ....

Assessment Summary (to be filled by the assessor)							
Activity	**Method**						**Result**	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			

Each Assessment Task (with performance criteria)			
Assessment Task 1	Description of assessment task 1 Prepare and send production and quality report in format prescribed by your assessor		
During the practical assessment, candidate demonstrated the following:	Yes	No	Remarks
1 Performance Criteria 1: Properly wear Personal Protective Equipment appropriate to the risks at workplace			
2 Performance Criteria 2: Keep work area clean and clear of obstructions to prevent potential accident or injury			
Competent ☐	Not Yet Competent ☐		
Assessment Task 2	Description of assessment task 2 Perform Turning of components on CNC Turning Centre as per task/instruction given by assessor		
During the practical assessment, candidate demonstrated the following:	Yes	No	Remarks
1 Performance Criteria 1: Equip CNC Turning Centre with required tools			
2 Performance Criteria 2: Align work piece on the machine			
3 Performance Criteria 3: Execute machine program from control panel for required operation			
Competent ☐	Not Yet Competent ☐		

Assessment Task 3	Description of assessment task 3
	Perform Carving on CNC Machining Centre as per task/instructions given by assessor

During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Equip CNC Machining Centre with required tools (Bits, profile cutters etc.)			
2	Performance Criteria 2: Align work piece on the machine			
3	Performance Criteria 3: Execute machine program from control panel for required operation			
Competent ☐	Not Yet Competent ☐			

Assessment Task 4	Description of assessment task 4
	Perform Marquetry/Parquetry on CNC Laser Machine as per job nature assigned by assessor

During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Align multiple veneer sheets as per machine capacity			
2	Performance Criteria 2: Execute machine program from control panel for required operation			
Competent ☐	Not Yet Competent ☐			

Portfolio (if any)	Description of portfolio
	Diary log of practical work (Upholstery and Canning)

Current ☐	Sufficient ☐	Authentic ☐	Valid ☐	Reliable ☐

Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria 1 : Diary log of practical work for surface aesthetics on objects using CNC lathe			
2	Performance criteria 2: Diary log of practical work for surface aesthetics on objects using CNC machining centre			
3	Performance criteria 3: Diary log of practical work for surface aesthetics on objects using CNC laser			
Competent ☐	Not Yet Competent ☐			

Title of Qualification: National Vocational Certificate Level 4 in Furniture Technician (Carpenter)	CS Code:	Level: 04	Version: 01
Competency Standard Title: Develop drawings of furniture products using CAD/CAM	**Assessment Date (DD/MM/YY):**		

Candidate Details	Name: .... Registration/Roll Number: ....

Guidance for Candidate	**To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):**
	   7. **Assessment Task 1:** Develop 2D and 3D models of Furniture Components as per task/instructions given by assessor
	   8. **Assessment Task 2:** Convert CAD drawing into CAM Code as per job nature assigned by assessor
	And complete:
	   9. **Knowledge assessment test (Written)**
	  10. **Portfolios at the time of assessment (if any)**

Minimum Evidence Required	**During a practical assessment, under observation by an assessor, you will complete:**
	Assessment Task 1
	     Performance Criteria 1: Develop component and size chart of the furniture as per product design
	     Performance Criteria 2: Prepare drawing canvass in CAD software
	     Performance Criteria 3: Draw 2D Multiview of the components as per required measurements
	     Performance Criteria 4: Apply Hatches on the drawing to identify component material and Upholstery
	     Performance Criteria 5: Draw symbols on the drawing to identify hardware
	     Performance Criteria 6: Mention all dimensions on the drawing
	     Performance Criteria 7: Extrude component drawings into 3D models
	     Performance Criteria 8: Save CAD drawings in required file format
	     Performance Criteria 9: Print CAD drawings as per required scale
	
	Assessment Task 2
	     Performance Criteria 1: Create a Layer in your DWG file for CNC paths and copy the relevant geometry onto it
	     Performance Criteria 2: Prepare drawing for CAM (Flatten, Overkill, convert splines and ellipses into arcs and polylines etc.)
	     Performance Criteria 3: Extract the CAD drawing to CAM or CNC programme as per process requirements
	     Performance Criteria 4: Select appropriate machining tools in CAM module
	     Performance Criteria 5: Run simulation of CNC program to ensure desired results
	     Performance Criteria 6: Save CNC program in desired format.
	
	Portfolios required at the time of assessment (if any) for
	     Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for developing drawing of furniture products using CAD/CAM

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: .... Registration/Roll Number: .... Candidate Signature:................................. ....
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Name of the Assessor: .... Assessor's code: .... Signature of the Assessor:... ....

Assessment Summary (to be filled by the assessor)							
Activity	**Method**					**Result**	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			

Each Assessment Task (with performance criteria)	
Assessment Task 1	Description of assessment task 1 Develop 2D and 3D models of Furniture Components as per task/instructions given by assessor

During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Develop component and size chart of the furniture as per product design			
2	Performance Criteria 2: Prepare drawing canvass in CAD software			
3	Performance Criteria 3: Draw 2D Multiview of the components as per required measurements			
4	Performance Criteria 4: Apply Hatches on the drawing to identify component material and Upholstery			
5	Performance Criteria 5: Draw symbols on the drawing to identify hardware			
6	Performance Criteria 6: Mention all dimensions on the drawing			
7	Performance Criteria 7: Extrude component drawings into 3D models			
8	Performance Criteria 8: Save CAD drawings in required file format			
9	Performance Criteria 9: Print CAD drawings as per required scale			

Competent ☐	Not Yet Competent ☐

Assessment Task 2	Description of assessment task 2			
	Convert CAD drawing into CAM Code as per job nature assigned by assessor			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Create a Layer in your DWG file for CNC paths and copy the relevant geometry onto it			
2	Performance Criteria 2: Prepare drawing for CAM (Flatten, Overkill, convert splines and ellipses into arcs and polylines etc.)			
3	Performance Criteria 3: Extract the CAD drawing to CAM or CNC programme as per process requirements			
4	Performance Criteria 4: Select appropriate machining tools in CAM module			
5	Performance Criteria 5: Run simulation of CNC program to ensure desired results			
6	Performance Criteria 6: Save CNC program in desired format			
Competent ☐	Not Yet Competent ☐			

Portfolio (if any)	Description of portfolio			
	Diary log of practical work			
Current ☐ Sufficient ☐ Authentic ☐ Valid ☐ Reliable ☐				
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria 1: Diary log of practical work for developing drawing of furniture products using CAD/CAM			
Competent ☐	Not Yet Competent ☐			

Title of Qualification: National Vocational Certificate Level 4 in Furniture Technician (CAD/CAM Operator) (0722 CFT 011)	CS Code: 072200898	Level: 04	Version: 01
Competency Standard Title: CAD-CAM	Assessment Date (DD/MM/YY):	Duration 5 hrs	

Candidate Details	Name: .... Registration/Roll Number: ....
Guidance for Candidate	**To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):** 11. **Assessment Task 1:** Develop drawing of furniture components on CAD software and convert into CAM code as assigned by the assessor 12. **Assessment Task 2:** Perform surface aesthetics on furniture components using CNC machines as instructed by the assessor **And complete:** 13. **Knowledge assessment test (Written or Oral)** 14. **Portfolios at the time of assessment (if any)**
Minimum Evidence Required	**During a practical assessment, under observation by an assessor, you will complete:** **Assessment Task 1** Performance Criteria 1: Develop component and size chart of the furniture as per product design Performance Criteria 2: Prepare drawing canvass in CAD software Performance Criteria 3: Draw 2D Multiview of the components as per required measurements Performance Criteria 4: Apply Hatches on the drawing to identify component material and Upholstery Performance Criteria 5: Draw symbols on the drawing to identify hardware Performance Criteria 6: Mention all dimensions on the drawing Performance Criteria 7: Extrude component drawings into 3D models Performance Criteria 8: Save CAD drawings in required file format Performance Criteria 9: Create a Layer in your DWG file for CNC paths and copy the relevant geometry onto it Performance Criteria 10: Prepare drawing for CAM (Flatten, Overkill, convert splines and ellipses into arcs and polylines etc.) Performance Criteria 11: Extract the CAD drawing to CAM or CNC programe as per process requirements Performance Criteria 12: Select appropriate machining tools in CAM module Performance Criteria 13: Run simulation of CNC program to ensure desired results Performance Criteria 14: Save CNC program in desired format.

	Assessment Task 2 Performance Criteria 1: Properly wear Personal Protective Equipment appropriate to the risks at workplace Performance Criteria 2: Apply surface aesthetics using Turning/ Carving/ Marquetry/ Parquetry as per drawing - Equip CNC machine with required tools - Align work piece on the machine as per process requirements - Execute machine program from control panel for required - Unload work piece from machine - Clean the work piece and store at designated place Performance Criteria 3: Record production and quality status on production report
	Portfolios required at the time of assessment (if any) for Performance criteria 1 for the evaluation of portfolio: Diary log of completed work on developing drawings of furniture products on CAN/CAM

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: .... Registration/Roll Number: .... Candidate Signature:.................................. ....
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Name of the Assessor: .... Assessor's code: .... Signature of the Assessor:.. ....

Assessment Summary (to be filled by the assessor)							
Activity	**Method**					**Result**	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			

Each Assessment Task (with performance criteria)					
Assessment Task 1		Description of assessment task 1			
		Develop drawing of furniture components on CAD software and convert into CAM code as assigned by the assessor			
During the practical assessment, candidate demonstrated the following:			Yes	No	Remarks
1	Performance Criteria 1: Develop component and size chart of the furniture as per product design				
2	Performance Criteria 2: Prepare drawing canvass in CAD software				
3	Performance Criteria 3: Draw 2D Multiview of the components as per required measurements				
4	Performance Criteria 4: Apply Hatches on the drawing to identify component material and Upholstery				
5	Performance Criteria 5: Draw symbols on the drawing to identify hardware				
6	Performance Criteria 6: Mention all dimensions on the drawing				
7	Performance Criteria 7: Extrude component drawings into 3D models				
8	Performance Criteria 8: Save CAD drawings in required file format				
9	Performance Criteria 9: Create a Layer in your DWG file for CNC paths and copy the relevant geometry onto it				
10	Performance Criteria 10: Prepare drawing for CAM (Flatten, Overkill, convert splines and ellipses into arcs and polylines etc.)				
11	Performance Criteria 11: Extract the CAD drawing to CAM or CNC program as per process requirements				
12	Performance Criteria 12: Select appropriate machining tools in CAM module				
13	Performance Criteria 13: Run simulation of CNC program to ensure desired results				
14	Performance Criteria 14: Save CNC program in desired format.				
Competent ☐		Not Yet Competent ☐			

Assessment Task 2		Description of assessment task 2			
		Perform surface aesthetics on furniture components using CNC machines as instructed by the assessor			
During the practical assessment, candidate demonstrated the following:			Yes	No	Remarks
1	Performance Criteria 1: Properly wear Personal Protective Equipment appropriate to the risks at workplace				
2	Performance Criteria 2: Apply surface aesthetics using Turning/ Carving/ Marquetry/ Parquetry as per drawing • Equip CNC machine with required tools • Align workpiece on the machine as per process requirements • Execute machine program from control panel for required • Unload workpiece from machine • Clean the workpiece and store at designated place				
3	Performance Criteria 3: Record production and quality status on production report				
Competent ☐			Not Yet Competent ☐		

Portfolio (if any)		Description of portfolio			
		Diary Log of completed work			
Current ☐ Sufficient ☐ Authentic ☐ Valid ☐ Reliable ☐					
Portfolio meet the following performance standards:			Yes	No	Remarks
1	Performance criteria 1: Diary log of completed work on developing drawings of furniture products on CAN/CAM				
Competent ☐			Not Yet Competent ☐		