



# Finisher Bamboo Furniture

Options: Wood and Metal

QP Code: FFS/Q4104

Version: 2.0

NSQF Level: 3

Furniture and Fittings Skill Council || 407-408, DLF City Court, M G Road, Sikanderpur  
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## Qualification Pack

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## Qualification Pack

### FFS/Q4104: Finisher Bamboo Furniture

#### Brief Job Description

Finisher carries out different activities involved in giving bamboo furniture a finished look as required by the client. The job holder must comply with relevant health and safety standards while carrying out the tasks and handling chemicals.

#### Personal Attributes

The person should have good eyesight, hand eye coordination and the eye for detail. She/he should be able to take and comply with instructions and should be result oriented. She/he should have the ability to handle strong chemical odours while working with different finishing materials.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

1. [FFS/N4107: Prepare for finishing bamboo furniture](#)
2. [FFS/N4108: Carry out finishing activities](#)
3. [FFS/N8401: Quality Control](#)
4. [FFS/N8601: Ensure health and safety at workplace](#)
5. [FFS/N8801: Work effectively with others](#)

##### Options(Not mandatory):

Option : Wood and Metal

She/he prepares the wooden/metal furniture surface for painting, polishing and assists in various process of painting/polishing on wooden furniture or metal furniture to achieve the desired finish as per company standards and/or customers requirements.

1. [FFS/N0119: Staining and polishing wooden furniture](#)
2. [FFS/N0120: Painting wooden furniture](#)
3. [FFS/N2101: Painting/ polishing metallic/ steel fabricated furniture](#)
4. [FFS/N2102: Powder coating metallic/ steel fabricated furniture](#)

#### Qualification Pack (QP) Parameters

<b>Sector</b>	Furniture & Fittings
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## Qualification Pack

<b>Sub-Sector</b>	Bamboo and Cane Furniture
<b>Occupation</b>	Finishing
<b>Country</b>	India
<b>NSQF Level</b>	3
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/7317.0300/7522.2000/8122
<b>Minimum Educational Qualification &amp; Experience</b>	5th Class
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>Deactivation Date</b>	17/10/2023
<b>NSQC Approval Date</b>	22/08/2019
<b>Version</b>	2.0

## Qualification Pack

### FFS/N4107: Prepare for finishing bamboo furniture

#### Description

Finisher carries out different activities involved in giving bamboo furniture a finished look as required by the client. The job holder must comply with relevant health and safety standards while carrying out the tasks and handling chemicals. He/she performs job duties independently as per given work instructions and is responsible for own outcomes.

#### Scope

This unit/task covers the following:

- Prepare the work area
- Surface treatment of bamboo
- Bleaching the bamboo
- Working safely

#### Elements and Performance Criteria

##### *Prepare the work area*

To be competent, the user/individual on the job must be able to:

- PC1.** obtain job instructions from responsible personnel job instruction: type of finish, color, effect, material required etc
- PC2.** read and confirm that the given instructions and the finish specifications are complete and correct
- PC3.** obtain appropriate materials, hand and power tools/machines suitable to carry out the given task tools and materials: e.g. brush, spray gun, blow torch, sand papers (grit 60, 80, 100, 120, 150), muslin cloth, thinner, stain, rag cloth, polish, fillers, sealer, clear varnish, adhesive, wall putti, acrylic paint etc.
- PC4.** check the material procured with the order document
- PC5.** interact with supervisor in order to understand the client requirement and scope of work
- PC6.** plan out an efficient sequence of work as per the job requirement and specification
- PC7.** loading and unloading of bamboo furniture if required
- PC8.** identify and check the material before starting the finishing activities
- PC9.** report any shortage or defect of materials to the concerned person before commencement of work
- PC10.** arrange the material in the order you will using them to quickly find the right material when you need it without damage and time wastage
- PC11.** check that the selected tools & equipment are in safe working condition and ready for use
- PC12.** check that the gun pressure is appropriate for spraying

##### *Surface treatment of bamboo*

To be competent, the user/individual on the job must be able to:

- PC13.** check for flaws like scratches, cracks, milling marks, glue, pin holes and other imperfections on the surface of bamboo furniture

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- PC14.** fill pin holes with fillers carefully wherever required
- PC15.** perform sanding on bamboo surface by hand or by portable power sander and as per sequence appropriate sequence: start with sandpaper that has a grain of about 60 or 80-grit and move forward, sand paper no. 60/80/100/120 no, are normally used for sanding in increasing order
- PC16.** identify the requirement and repeat the rounds of sanding till he/she gets the smooth required surface
- PC17.** wipe with rag and remove any dust particle or excess material
- PC18.** check whether the surface is ready for staining and polishing

### *Bleaching the bamboo*

To be competent, the user/individual on the job must be able to:

- PC19.** check and follow the manufacturer's recommendation strictly in case of bleaching as it is a very strong chemical
- PC20.** bleach the discolored (if required) bamboo before staining, polishing, painting or varnishing
- PC21.** prepare the bleach solution as per given specification
- PC22.** soak the bamboo in bleach solution completely for uniform result
- PC23.** handle the bamboo and the bleach solution carefully and safely
- PC24.** remove the bamboo from the solution and wash
- PC25.** dry the bleached bamboo appropriately: avoid direct sunlight on bamboo slivers/ sticks, keep them away from dust, pile the bamboo in correct standing order for drying etc.

### *Working safely*

To be competent, the user/individual on the job must be able to:

- PC26.** return all the used tools and materials safely to their appropriate storage area
- PC27.** work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines
- PC28.** maintain correct body posture while standing and working for long hours and carrying heavy materials
- PC29.** lift, carry or move heavy bamboo furniture and accessories from one place to another using approved safe working practices
- PC30.** ensure that the work area is free of clutters to carry out activities smoothly
- PC31.** select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelines personal protective equipment: masks, safety glasses, head protection, safety footwear, gloves, aprons, warning signs and tapes, fire extinguisher, first aid kit
- PC32.** follow electrical safety measures while working with electrically powered tools & equipment
- PC33.** follow safety measures while handling strong chemicals

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

1. applicable legislation, standards, policies, and procedures followed in the company
2. one's roles, responsibilities and expectations of the job

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3. the organizations rules, codes, guidelines and standards
4. statutory responsibilities, organizational legislation and regulations
5. method to handle tools and equipment safely and the health and safety implications of not doing so
6. escalation matrix
7. grievance handling as per organizational procedures
8. relevant health and safety requirements applicable in the work place
9. point of contact to obtain work related instructions, clarifications and support
10. importance of following health, hygiene, safety
11. importance of following quality standards
12. organizational procedure and government policy of waste disposal
13. work target and review mechanism in the organization
14. general rules and regulations in a bamboo and cane sector
15. different type of furniture finishes in bamboo
16. different type of bamboo and its use in furniture making
17. importance of using personal protective equipment appropriate to the work
18. hazards and risks associated with bamboo usage for furniture making and how to minimize accidents and injury to self and others
19. importance of maintaining healthy work environment
20. different types of tools, machines and material and their use tools and materials: e.g. brush, spray gun, blow torch, sand papers (grit 60, 80, 100, 120, 150), muslin cloth, thinner, stain, rag cloth, polish, fillers, sealer, clear varnish, adhesive, wall putti, acrylic paint etc.
21. how to read work instructions and specification correctly and accurately
22. ones own roles and responsibility at work place
23. methods used to identify defects
24. relevant methods used to rectify defects
25. safe disposal of waste materials
26. cleaning and maintenance procedures
27. spray gun handling procedures
28. safety procedures to be followed as applicable at work site
29. precaution to be taken for handling and storage of chemicals
30. type of hazards and risk at work place and procedures for dealing with them hazards: inhaling or spilling of chemical used for finishing work , poorly designed and rusted tools, repetitive movements, and stressful working conditions including insufficient rest periods, inadequate lighting and poor temperature control, sharp/pointed tools like knives, saw, hammer, etc.
31. process of surface treatment and its importance
32. how to fill the pin holes
33. how to do sanding on bamboo surface by hand or by portable power sander and as per sequence appropriate sequence: start with sandpaper that has a grain of about 60 or 80-grit and move forward, sand paper no. 60/80/100/120no, are normally used for sanding in increasing order
34. safety precautions to be taken while bleaching the bamboo

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35. steps involved in bleaching process
36. common mistakes in handling of materials that affect the quality of work
37. importance to maintain correct body posture while standing and working for long hours and carrying heavy materials
38. how to lift, carry or move heavy bamboo furniture and accessories from one place to another using approved safe working practices
39. common mistakes in handling of product affecting the finishing quality
40. importance of even drying of finishing material i.e. paint, polish, lacquer etc. for final finish look
41. different type of finishing material used like paint, polish, lacquer, varnish etc

### Generic Skills (GS)

User/individual on the job needs to know how to:

1. write in hindi or local language
2. fill formats, logs and forms related to work in local language or hindi/english
3. document measurement appropriately whenever required
4. read instructions from supervisor provided in local language or hindi
5. read and understand manufacturers instructions and job specifications
6. interpret pictorial representations and written signs or instructions
7. read and interpret numbers written in hindi or local language
8. understand safety symbols and basic warning signs wherever needed
9. communicate effectively with team members, supervisors, managers etc.
10. seek clarification on any unclear instructions in locally understood language
11. take decisions of one's own roles and responsibilities
12. decide on material requirement related to one's work
13. decide to accept or reject a work piece on the basis of quality parameter
14. plan and organize own work in a way that all activities are completed in time and as per specifications
15. plan work as per job specification
16. plan and organize cleaning and maintenance activities
17. work and deliver output as per client requirement
18. identify any defects in materials, tools and equipment and ways to resolve them
19. determine timely correction of errors to minimize rejection of pieces or re-work

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare the work area</i>	6	22	-	-
<b>PC1.</b> obtain job instructions from responsible personnel job instruction: type of finish, color, effect, material required etc	1	1	-	-
<b>PC2.</b> read and confirm that the given instructions and the finish specifications are complete and correct	1	2	-	-
<b>PC3.</b> obtain appropriate materials, hand and power tools/machines suitable to carry out the given task tools and materials: e.g. brush, spray gun, blow torch, sand papers (grit 60, 80, 100, 120, 150), muslin cloth, thinner, stain, rag cloth, polish, fillers, sealer, clear varnish, adhesive, wall putti, acrylic paint etc.	-	2	-	-
<b>PC4.</b> check the material procured with the order document	-	2	-	-
<b>PC5.</b> interact with supervisor in order to understand the client requirement and scope of work	1	1	-	-
<b>PC6.</b> plan out an efficient sequence of work as per the job requirement and specification	-	2	-	-
<b>PC7.</b> loading and unloading of bamboo furniture if required	1	1	-	-
<b>PC8.</b> identify and check the material before starting the finishing activities	-	2	-	-
<b>PC9.</b> report any shortage or defect of materials to the concerned person before commencement of work	-	2	-	-
<b>PC10.</b> arrange the material in the order you will use them to quickly find the right material when you need it without damage and time wastage	2	2	-	-
<b>PC11.</b> check that the selected tools & equipment are in safe working condition and ready for use	-	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> check that the gun pressure is appropriate for spraying	-	3	-	-
<i>Surface treatment of bamboo</i>	<b>4</b>	<b>12</b>	-	-
<b>PC13.</b> check for flaws like scratches, cracks, milling marks, glue, pin holes and other imperfections on the surface of bamboo furniture	-	2	-	-
<b>PC14.</b> fill pin holes with fillers carefully wherever required	1	1	-	-
<b>PC15.</b> perform sanding on bamboo surface by hand or by portable power sander and as per sequence appropriate sequence: start with sandpaper that has a grain of about 60 or 80-grit and move forward, sand paper no. 60/80/100/120no, are normally used for sanding in increasing order	1	4	-	-
<b>PC16.</b> identify the requirement and repeat the rounds of sanding till he/she gets the smooth required surface	-	2	-	-
<b>PC17.</b> wipe with rag and remove any dust particle or excess material	-	3	-	-
<b>PC18.</b> check whether the surface is ready for staining and polishing	2	-	-	-
<i>Bleaching the bamboo</i>	<b>7</b>	<b>19</b>	-	-
<b>PC19.</b> check and follow the manufacturer's recommendation strictly incase of bleaching as it is a very strong chemical	-	2	-	-
<b>PC20.</b> bleach the discolored (if required) bamboo before staining, polishing, painting or varnishing	-	2	-	-
<b>PC21.</b> prepare the bleach solution as per given specification	1	2	-	-
<b>PC22.</b> soak the bamboo in bleach solution completely for uniform result	1	2	-	-
<b>PC23.</b> handle the bamboo and the beach solution carefully and safely	2	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC24.</b> remove the bamboo from the solution and wash	3	3	-	-
<b>PC25.</b> dry the bleached bamboo appropriately: avoid direct sunlight on bamboo slivers/ sticks, keep them away from dust, pile the bamboo in correct standing order for drying etc.	-	6	-	-
<i>Working safely</i>	<b>8</b>	<b>22</b>	-	-
<b>PC26.</b> return all the used tools and materials safely to their appropriate storage area	2	2	-	-
<b>PC27.</b> work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	-	3	-	-
<b>PC28.</b> maintain correct body posture while standing and working for long hours and carrying heavy materials	-	3	-	-
<b>PC29.</b> lift, carry or move heavy bamboo furniture and accessories from one place to another using approved safe working practices	1	2	-	-
<b>PC30.</b> ensure that the work area is free of clutters to carry out activities smoothly	-	3	-	-
<b>PC31.</b> select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelinespersonal protective equipment: masks, safety glasses, head protection, safety footwear, gloves, aprons, warning signs and tapes, fire extinguisher, first aid kit	2	2	-	-
<b>PC32.</b> follow electrical safety measures while working with electrically powered tools & equipment	2	3	-	-
<b>PC33.</b> follow safety measures while handling strong chemicals	1	4	-	-
<b>NOS Total</b>	<b>25</b>	<b>75</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FFS/N4107
<b>NOS Name</b>	Prepare for finishing bamboo furniture
<b>Sector</b>	Furniture & Fittings
<b>Sub-Sector</b>	Bamboo and Cane Furniture
<b>Occupation</b>	Finishing
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>NSQC Clearance Date</b>	22/08/2019

## FFS/N4108: Carry out finishing activities

### Description

Finisher carries out different activities involved in giving bamboo furniture a finished look as required by the client. The job holder must comply with relevant health and safety standards while carrying out the tasks and handling chemicals. He/she performs job duties independently as per given work instructions and is responsible for own outcomes.

### Scope

This unit/task covers the following:

- Traditional colouring of bamboo by blow torch
- Colouring of bamboo by staining
- Colouring of bamboo with paint
- Finishing the bamboo with lacquer, varnish or polish

### Elements and Performance Criteria

#### *Traditional colouring of bamboo by blow torch*

To be competent, the user/individual on the job must be able to:

- PC1.** burn the bamboo with blow torch appropriately to get desired resultsAppropriately: maintain the appropriate distance between the bamboo and the blow torch, burn at a pace that give desired uniform color, burn lightly (for lesser time) to get light effect on bamboo and for longer duration for darker effect
- PC2.** make different pattern/design on bamboo by revolving it in circular motion against the blow torch
- PC3.** perform sanding on bamboo surface by hand using sand paper to give it a smooth surface
- PC4.** identify the requirement and repeat the rounds of sanding till he/she gets the smooth required surface
- PC5.** wipe with rag and remove any dust particle or excess material
- PC6.** clean the bamboo with wet cloth and leave for drying in sun for appropriate time
- PC7.** prepare the solution of adhesive and water as per manufacturer's specification
- PC8.** apply the coat of adhesive solution on bamboo and leave for drying
- PC9.** finish the furniture or its components by applying the coat of clear varnish with the help of the spray gun

#### *Colouring of bamboo by staining*

To be competent, the user/individual on the job must be able to:

- PC10.** check the bamboo before staining for clean, grease free and smooth surface
- PC11.** perform sanding on bamboo surface by hand using sand paper to give it a smooth surface
- PC12.** wipe with rag and remove any dust particle or excess material
- PC13.** select and apply matching filler to close the pores of the bamboo
- PC14.** match the color of the stain with the design specification

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- PC15.** stain the wood with the brush or pad/ball of clean rag
- PC16.** follow the correct process of staining correct process: apply the stain using brush or pad, spread the stain liberally and evenly, work with the grain, blend wet edges as quickly as possible, distribute the color evenly, absorb the excess stain by cloth
- PC17.** sand lightly as per requirement and apply wash coat to prevent color from bleeding
- PC18.** finish the furniture with top coat of clear varnish, lacquer, or polishing using a spray gun

### *Colouring of bamboo with paint*

To be competent, the user/individual on the job must be able to:

- PC19.** perform sanding on bamboo surface by hand using sand paper to give it a smooth surface
- PC20.** wipe with rag and remove any dust particle or excess material
- PC21.** clean the bamboo with wet cloth and leave for drying in sun for appropriate time
- PC22.** apply wall putti to fill the pores
- PC23.** perform sanding again to get a smooth surface to painting
- PC24.** select the paint color as per design specification
- PC25.** apply a thin and even coat of acrylic paint on the bamboo with hand brush and keep it for drying
- PC26.** match the color with the design specification and apply another coat if required
- PC27.** finish the furniture or its components by applying the coat of clear varnish with the help of the spray gun

### *Finishing the wood*

To be competent, the user/individual on the job must be able to:

- PC28.** select appropriate finish depending upon the type of coloring technique and the final effect required
- PC29.** check and decipher whether the finishing material (lacquer, varnish etc.) can be used directly for finishing or need to be diluted by thinner
- PC30.** check the labels for appropriate solvents, mixing quantity, time between coats and precautions for use
- PC31.** apply the finish coat by hand or by natural bristle brush or foam brush
- PC32.** check for and sand off any bristles that appear after the first finish coat
- PC33.** apply finish by brush following correct process Correct Process: side to side, front to back, completing the stroke etc.
- PC34.** determine the number of coats required to get the desired final finishing
- PC35.** apply finish by spray gun using correct process Correct Process: appropriate distance, correct pressure etc.
- PC36.** choose appropriate tool for applying finishes as per the work requirement Tools: rags, brushes, rubbing pads and spray guns
- PC37.** follow the appropriate process to apply finish Appropriate Process: apply the first finish coat, let the first finish coat dry completely, sand again, remove the dust with a tack rag or a vacuum and then apply the second coat and so on till one get the required finish, no sanding after the final coat

## Knowledge and Understanding (KU)

## Qualification Pack

The individual on the job needs to know and understand:

1. applicable legislation, standards, policies, and procedures followed in the company
2. one's roles, responsibilities and expectations of the job
3. the organizations rules, codes, guidelines and standards
4. statutory responsibilities, organizational legislation and regulations
5. contact person in case of queries on procedure or products
6. method to handle tools and equipment safely and the health and safety implications of not doing so
7. escalation matrix
8. grievance handling as per organizational procedures
9. relevant health and safety requirements applicable in the work place
10. point of contact to obtain work related instructions, clarifications and support
11. importance of following health, hygiene, safety
12. importance of following quality standards
13. organizational procedure and government policy of waste disposal
14. work target and review mechanism in the organization
15. general rules and regulations in a bamboo and cane sector
16. different type of furniture finishes in bamboo
17. different type of finishing material used like paint, polish, lacquer, varnish etc
18. different type of bamboo and its use in furniture making
19. importance of using personal protective equipment appropriate to the work
20. hazards and risks associated with bamboo usage for furniture making and how to minimize accidents and injury to self and others
21. importance of maintaining healthy work environment
22. different types of tools, machines and material and their use tools and materials: e.g. brush, spray gun, blow torch, sand papers (grit 60, 80, 100, 120, 150), muslin cloth, thinner, stain, rag cloth, polish, fillers, sealer, clear varnish, adhesive, wall putti, acrylic paint etc.
23. how to read work instructions and specification correctly and accurately
24. ones own roles and responsibility at work place
25. methods used to identify defects
26. relevant methods used to rectify defects
27. safe disposal of waste materials
28. cleaning and maintenance procedures
29. spray gun handling procedures
30. safety procedures to be followed as applicable at work site
31. precaution to be taken for handling and storage of chemicals
32. type of hazards and risk at work place and procedures for dealing with them hazards: inhaling or spilling of chemical used for finishing work , poorly designed and rusted tools, repetitive movements, and stressful working conditions including insufficient rest periods, inadequate lighting and poor temperature control, sharp/pointed tools like knives, saw, hammer, etc.

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33. how to do sanding on bamboo surface by hand or by portable power sander and as per sequence appropriate sequence: start with sandpaper that has a grain of about 60 or 80-grit and move forward, sand paper no. 60/80/100/120no, are normally used for sanding in increasing order
34. common mistakes in handling of materials that affect the quality of work
35. importance to maintain correct body posture while standing and working for long hours and carrying heavy materials
36. how to lift, carry or move heavy bamboo furniture and accessories from one place to another using approved safe working practices
37. common mistakes in handling of product affecting the finishing quality
38. step by step process of traditional coloring of bamboo by using a blow torch
39. how to burn the bamboo with blow torch appropriately to get desired results appropriately: maintain the appropriate distance between the bamboo and the blow torch, burn at a pace that give desired uniform color, burn lightly (for lesser time) to get light effect on bamboo and for longer duration for darker effect
40. process of staining the bamboo process: apply the stain using brush or pad, spread the stain liberally and evenly, work with the grain, blend wet edges as quickly as possible, distribute the color evenly, absorb the excess stain by cloth
41. process of coloring the bamboo using acrylic paint
42. how to fill the pin holes
43. importance of even drying of finishing material i.e. paint, polish, lacquer etc. for final finish look
44. process to apply the final finish coat process: apply the first finish coat, let the first finish coat dry completely, sand again, remove the dust with a tack rag or a vacuum and then apply the second coat and so on till one get the required finish, no sanding after the final coat
45. how to use the brush for painting and finishing

## Generic Skills (GS)

User/individual on the job needs to know how to:

1. write in hindi or local language
2. fill formats, logs and forms related to work in local language or hindi/english
3. document measurement appropriately whenever required
4. read instructions from supervisor provided in local language or hindi
5. read and understand manufacturers instructions and job specifications
6. interpret pictorial representations and written signs or instructions
7. read and interpret numbers written in hindi or local language
8. understand safety symbols and basic warning signs wherever needed
9. communicate effectively with team members, supervisors, managers etc.
10. seek clarification on any unclear instructions in locally understood language
11. take decisions of one's own roles and responsibilities
12. decide on material requirement related to once work
13. decide to accept or reject a work piece on the basis of quality parameter

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- 14.** plan and organize own work in a way that all activities are completed in time and as per specifications
- 15.** plan work as per job specification
- 16.** plan and organize cleaning and maintenance activities
- 17.** work and deliver output as per client requirement
- 18.** identify any defects in materials, tools and equipment and ways to resolve them
- 19.** determine timely correction of errors to minimize rejection of pieces or re-work

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Traditional colouring of bamboo by blow torch</i>	<b>3</b>	<b>17</b>	-	-
<b>PC1.</b> burn the bamboo with blow torch appropriately to get desired resultsAppropriately: maintain the appropriate distance between the bamboo and the blow torch, burn at a pace that give desired uniform color, burn lightly (for lesser time) to get light effect on bamboo and for longer duration for darker effect	1	2	-	-
<b>PC2.</b> make different pattern/design on bamboo by revolving it in circular motion against the blow torch	-	2	-	-
<b>PC3.</b> perform sanding on bamboo surface by hand using sand paper to give it a smooth surface	-	2	-	-
<b>PC4.</b> identify the requirement and repeat the rounds of sanding till he/she gets the smooth required surface	1	2	-	-
<b>PC5.</b> wipe with rag and remove any dust particle or excess material	-	2	-	-
<b>PC6.</b> clean the bamboo with wet cloth and leave for drying in sun for appropriate time	-	2	-	-
<b>PC7.</b> prepare the solution of adhesive and water as per manufacturer's specification	1	1	-	-
<b>PC8.</b> apply the coat of adhesive solution on bamboo and leave for drying	-	2	-	-
<b>PC9.</b> finish the furniture or its components by applying the coat of clear varnish with the help of the spray gun	-	2	-	-
<i>Colouring of bamboo by staining</i>	<b>6</b>	<b>18</b>	-	-
<b>PC10.</b> check the bamboo before staining for clean, grease free and smooth surface	1	2	-	-
<b>PC11.</b> perform sanding on bamboo surface by hand using sand paper to give it a smooth surface	1	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> wipe with rag and remove any dust particle or excess material	-	1	-	-
<b>PC13.</b> select and apply matching filler to close the pores of the bamboo	-	3	-	-
<b>PC14.</b> match the color of the stain with the design specification	1	1	-	-
<b>PC15.</b> stain the wood with the brush or pad/ball of clean rag	1	2	-	-
<b>PC16.</b> follow the correct process of staining correct process: apply the stain using brush or pad, spread the stain liberally and evenly, work with the grain, blend wet edges as quickly as possible, distribute the color evenly, absorb the excess stain by cloth	1	3	-	-
<b>PC17.</b> sand lightly as per requirement and apply wash coat to prevent color from bleeding	1	2	-	-
<b>PC18.</b> finish the furniture with top coat of clear varnish, lacquer, or polishing using a spray gun	-	2	-	-
<i>Colouring of bamboo with paint</i>	<b>2</b>	<b>20</b>	-	-
<b>PC19.</b> perform sanding on bamboo surface by hand using sand paper to give it a smooth surface	-	3	-	-
<b>PC20.</b> wipe with rag and remove any dust particle or excess material	2	2	-	-
<b>PC21.</b> clean the bamboo with wet cloth and leave for drying in sun for appropriate time	-	2	-	-
<b>PC22.</b> apply wall putti to fill the pores	-	2	-	-
<b>PC23.</b> perform sanding again to get a smooth surface to painting	-	2	-	-
<b>PC24.</b> select the paint color as per design specification	-	2	-	-
<b>PC25.</b> apply a thin and even coat of acrylic paint on the bamboo with hand brush and keep it for drying	-	3	-	-
<b>PC26.</b> match the color with the design specification and apply another coat if required	-	2	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC27.</b> finish the furniture or its components by applying the coat of clear varnish with the help of the spray gun	-	2	-	-
<i>Finishing the wood</i>	<b>14</b>	<b>20</b>	-	-
<b>PC28.</b> select appropriate finish depending upon the type of coloring technique and the final effect required	-	3	-	-
<b>PC29.</b> check and decipher whether the finishing material (lacquer, varnish etc.) can be used directly for finishing or need to be diluted by thinner	2	-	-	-
<b>PC30.</b> check the labels for appropriate solvents, mixing quantity, time between coats and precautions for use	3	-	-	-
<b>PC31.</b> apply the finish coat by hand or by natural bristle brush or foam brush	-	3	-	-
<b>PC32.</b> check for and sand off any bristles that appear after the first finish coat	1	2	-	-
<b>PC33.</b> apply finish by brush following correct process Correct Process: side to side, front to back, completing the stroke etc.	1	3	-	-
<b>PC34.</b> determine the number of coats required to get the desired final finishing	1	2	-	-
<b>PC35.</b> apply finish by spray gun using correct process Correct Process: appropriate distance, correct pressure etc.	1	2	-	-
<b>PC36.</b> choose appropriate tool for applying finishes as per the work requirement Tools: rags, brushes, rubbing pads and spray guns	2	2	-	-
<b>PC37.</b> follow the appropriate process to apply finish Appropriate Process: apply the first finish coat, let the first finish coat dry completely, sand again, remove the dust with a tack rag or a vacuum and then apply the second coat and so on till one get the required finish, no sanding after the final coat	3	3	-	-
<b>NOS Total</b>	<b>25</b>	<b>75</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FFS/N4108
<b>NOS Name</b>	Carry out finishing activities
<b>Sector</b>	Furniture & Fittings
<b>Sub-Sector</b>	Bamboo and Cane Furniture
<b>Occupation</b>	Finishing
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>NSQC Clearance Date</b>	22/08/2019

## FFS/N8401: Quality Control

### Description

This unit covers the key skills and knowledge required to monitor the quality at different stages of furniture making.

### Scope

This unit/task covers the following:

- Quality check at different stages of furniture making

### Elements and Performance Criteria

#### *Quality check at different stages of furniture making*

To be competent, the user/individual on the job must be able to:

- PC1.** check and use raw material as per the specified quality standards
- PC2.** identify defects and communicate to the appropriate personnel when raw material do not confirm to quality standards
- PC3.** check for any irregularities like splinters, protruding nails, cracks and unwanted cavities
- PC4.** check for sliver sizes
- PC5.** check for proper structural strength by applying load
- PC6.** identify amendable or adjustable defects and modify them
- PC7.** carry out quality checks at specified intervals according to instructions
- PC8.** check and ensure that the final sliver is as per client requirement
- PC9.** take appropriate action for fault rectification
- PC10.** check for appropriate moisture content in bamboo for quality processing
- PC11.** check the quality of bamboo slivers
- PC12.** Clean and maintain the machine after completion of work
- PC13.** Sharpen the blades/ cutting tools of the machine regularly

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

1. applicable legislation, standards, policies, and procedures followed in the company
2. once roles, responsibilities and expectations of the job
3. the organizations rules, codes, guidelines and standards
4. statutory responsibilities, organizational legislation and regulations
5. contact person in case of queries on procedure or products
6. method to handle tools and equipment safely and the health and safety implications of not doing so

## Qualification Pack

7. escalation matrix
8. grievance handling as per organizational procedures
9. relevant health and safety requirements applicable in the work place
10. point of contact to obtain work related instructions, clarifications and support
11. importance of following health, hygiene, safety
12. importance of following quality standards
13. organizational procedure and government policy of waste disposal
14. work target and review mechanism in the organization
15. general rules and regulations in a bamboo and cane sector
16. different types of furniture made from bamboo.
17. different type of bamboo and its use in furniture making
18. various types of slivering machines and their uses
19. correct operation of the machine controls in both hand and power modes
20. various parts of machine
21. steps to stop the machine in both normal and emergency situations, and the procedure for restarting after an emergency
22. various relevant slivering techniques available in the industry
23. cleaning and maintenance procedures and its importance
24. safe disposal of waste materials
25. importance of using appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelines Personal protective equipment: masks, safety glasses, head protection, ear Safe conditions: correctly isolated; cleaning the machine; removing and disposing of waste correctly, remove the plug safely etc.
26. hazards associated with the cutting operations and how they can be minimized Hazards: revolving/moving parts of machinery; sparks/airborne particles; insecure components; burrs and sharp edges on components, etc.
27. process of making bamboo sliver using slivering machine
28. sorting and storing of bamboo slivers

### Generic Skills (GS)

User/individual on the job needs to know how to:

1. write in Hindi or local language
2. fill formats, logs and forms related to work in local language Hindi/English
3. document measurement appropriately whenever required
4. read instructions from supervisor provided in local language or Hindi
5. read and understand manufacturers instructions and job specifications
6. interpret pictorial representations and written signs or instructions
7. read and interpret numbers written in Hindi or local language
8. understand safety symbols and basic warning signs wherever needed
9. Communicate effectively with team members, supervisors, managers etc.

## **Qualification Pack**

- 10.** seek clarification on any unclear instructions in locally understood language
- 11.** take decisions of once own roles and responsibilities
- 12.** decide on material requirement for related to once work
- 13.** decide on to accept or reject a work piece on the basis of quality parameter
- 14.** plan and organize own work in a way that all activities are completed in time and as per specifications
- 15.** plan word as per job specification
- 16.** plan and organize cleaning and maintenance activities
- 17.** work and deliver output as per client requirement and satisfaction
- 18.** Identify any defects in materials, tools and equipment and ways to resolve them
- 19.** determine timely correction of errors to minimize rejection of pieces or rework

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Quality check at different stages of furniture making</i>	<b>25</b>	<b>75</b>	-	-
<b>PC1.</b> check and use raw material as per the specified quality standards	4	5	-	-
<b>PC2.</b> identify defects and communicate to the appropriate personnel when raw material do not confirm to quality standards	4	5	-	-
<b>PC3.</b> check for any irregularities like splinters, protruding nails, cracks and unwanted cavities	3	6	-	-
<b>PC4.</b> check for sliver sizes	-	9	-	-
<b>PC5.</b> check for proper structural strength by applying load	-	9	-	-
<b>PC6.</b> identify amendable or adjustable defects and modify them	-	9	-	-
<b>PC7.</b> carry out quality checks at specified intervals according to instructions	-	9	-	-
<b>PC8.</b> check and ensure that the final sliver is as per client requirement	9	-	-	-
<b>PC9.</b> take appropriate action for fault rectification	-	4	-	-
<b>PC10.</b> check for appropriate moisture content in bamboo for quality processing	5	5	-	-
<b>PC11.</b> check the quality of bamboo slivers	-	4	-	-
<b>PC12.</b> Clean and maintain the machine after completion of work	-	5	-	-
<b>PC13.</b> Sharpen the blades/ cutting tools of the machine regularly	-	5	-	-
<b>NOS Total</b>	<b>25</b>	<b>75</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FFS/N8401
<b>NOS Name</b>	Quality Control
<b>Sector</b>	Furniture & Fittings
<b>Sub-Sector</b>	Bamboo and Cane Furniture
<b>Occupation</b>	Production- Bamboo and Cane Furniture
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>NSQC Clearance Date</b>	22/08/2019

## Qualification Pack

### FFS/N8601: Ensure health and safety at workplace

#### Description

This OS unit covers health, safety and security at the workplace. This includes procedures and practices that candidate need to follow to help maintain a healthy, safe and secure work environment.

#### Scope

This unit/task covers the following:

- Health and safety-Dealing with emergencies

#### Elements and Performance Criteria

##### *Health and Safety*

To be competent, the user/individual on the job must be able to:

- PC1.** work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines
- PC2.** ensure that health and safety instructions applicable to the work place are being followed
- PC3.** check the worksite for any possible health and safety hazards
- PC4.** Follow manufacturers instructions and job specifications relating to safe use of materials specifically chemicals and power equipment
- PC5.** ensure safe handling and disposal of waste and debris
- PC6.** identify and report any hazards and potential risks/ threats to supervisors or other authorized personnel  
Hazards: sharp edged tools, hazardous surfaces, physical hazards, electrical hazards, health hazards from chemicals and other such toxic material etc.
- PC7.** undertake first aid activities in case of any accident, if required and asked to do so
- PC8.** select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelines  
Personal Protective Equipment: masks, safety glasses, head protection, ear muffs, safety footwear, gloves, aprons etc.
- PC9.** maintain correct body posture while standing and working for long hours and carrying heavy materials
- PC10.** lift, carry or move heavy wooden furniture and accessories from one place to another using approved safe working practices
- PC11.** handle all required tools, machines , materials & equipment safely
- PC12.** adhere to relevant occupational safety policies while handling sharp tools to make and install furniture and fittings
- PC13.** take safety measures while handling glass, heavy wood, materials, chemicals etc.
- PC14.** apply good housekeeping practices at all times  
Good Housekeeping Practices: clean/tidy work areas, removal/disposal of waste products, protect surfaces
- PC15.** report accident/incident report to authorized personal
- PC16.** perform basic safety checks before operation of all machines, tools and electrical equipment
- PC17.** follow recommended material handling procedure to control damage and personal injury

## Qualification Pack

**PC18.** follow safe working practices at all times

### *Dealing with Emergencies*

To be competent, the user/individual on the job must be able to:

**PC19.** follow appropriate procedure in case a of fire emergency

**PC20.** follow electrical safety measures while working with electrically powered tools & equipment

**PC21.** follow agreed work location procedures in the event of an emergency or an accident

**PC22.** follow emergency and evacuation procedures in case of accidents, fires, natural calamities

**PC23.** Check and ensure general health and safety equipment are available at work site. General Health and Safety Equipment: fire extinguishers; first aid equipment; safety instruments and clothing; safety installations (e.g. fire exits, exhaust fans)

**PC24.** Comply with restrictions imposed on harmful chemicals inside work area during working hours

**PC25.** correctly demonstrate rescue techniques applied during fire hazard

**PC26.** demonstrate good housekeeping in order to prevent fire hazards

**PC27.** demonstrate the correct use of a fire extinguisher

**PC28.** demonstrate how to free a person from electrocution

**PC29.** respond promptly and appropriately to an accident situation or medical emergency

**PC30.** participate in emergency procedures Emergency Procedures: raising alarm, safe/efficient, evacuation, correct means of escape, correct assembly point, roll call, correct return to work

**PC31.** use the various appropriate fire extinguishers on different types of fires correctly. Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no longer receiving electricity); Class D: combustible metals such as magnesium, titanium, and sodium (These fires burn at extremely high temperatures and require special suppression agents)

**PC32.** state methods of accident prevention in the work environment. Methods of accident prevention: training in health and safety procedures; using health and safety procedures; use of equipment and working practices (such as safe carrying procedures); safety notices, advice; instruction from colleagues and supervisors

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

1. organizational procedures for safe handling of equipment and machine operations
2. how to respond to emergency situation in line with organisational procedures
3. reporting protocol and documentation required
4. whom to contact in case of an emergency
5. Where to get the list of contact in case of an emergency in the organization
6. common health and safety hazards in a work environment and related precautions
7. organizational procedures for safe handling of tools and equipment
8. how to respond to an emergency situation

## Qualification Pack

9. potential risks and threats
10. organizational reporting protocol
11. health and safety practices at work place
12. potential hazards and risks which may be present at furniture and fittings related workplace
13. storage and handling of hazardous substances
14. importance of good housekeeping
15. procedure to be followed for safe disposal of waste
16. safe working practices in a furniture and fittings related workplace
17. how to deal with an accident which involve human life
18. different types of personal protective equipment and their use
19. how to follow safe working practices while at work
20. different risks associated with the use of electrical equipment
21. preventative and remedial actions to be taken in the case of exposure to toxic materials, Exposure: ingested, contact with skin, inhaled Preventative action: ventilation, masks, protective clothing/ equipment); Remedial action: immediate first aid, report to supervisor Toxic materials: solvents, flux, lead
22. importance of using protective clothing/equipment while working
23. Various causes of fire
24. techniques of using the different fire extinguishers
25. different type of fire extinguishers and their use
26. various types of safety signs and what they mean
27. Appropriate basic first aid treatment relevant to the condition eg. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries, etc.
28. importance of safe lifting practices and correct body postures
29. list of names (and job titles if applicable), and the contact details of all the people responsible for health and safety in a workplace

## Generic Skills (GS)

User/individual on the job needs to know how to:

1. write in Hindi or local language
2. fill logs, forms and formats in local language or Hindi for recording quantity and quality of work figures, defects and other related information, etc. whenever needed
3. document measurement appropriately whenever required
4. read all organizational and equipment related health and safety manuals and documents
5. read and comprehend safety related documents
6. communicate effectively with team members, supervisors, managers etc
7. seek clarification on any unclear instructions in locally understood language
8. take decisions of once own roles and responsibilities
9. decide on material requirement for related to once work
10. decide on to accept or reject a work piece on the basis of quality parameter

## **Qualification Pack**

- 11.** plan and organize own work in a way that all activities are completed in time and as per specifications
- 12.** plan work as per job specification
- 13.** plan and organize cleaning and maintenance activities
- 14.** work and deliver output as per client requirement and satisfaction
- 15.** identify any defects in materials, tools and equipment and ways to resolve them
- 16.** determine timely correction of errors to minimize rejection of pieces or rework
- 17.** analyse the situation and take appropriate actions while dealing with team members
- 18.** analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Health and Safety</i>	<b>17</b>	<b>39</b>	-	-
<b>PC1.</b> work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	2	1	-	-
<b>PC2.</b> ensure that health and safety instructions applicable to the work place are being followed	1	2	-	-
<b>PC3.</b> check the worksite for any possible health and safety hazards	1	2	-	-
<b>PC4.</b> Follow manufacturers instructions and job specifications relating to safe use of materials specifically chemicals and power equipment	1	2	-	-
<b>PC5.</b> ensure safe handling and disposal of waste and debris	-	3	-	-
<b>PC6.</b> identify and report any hazards and potential risks/ threats to supervisors or other authorized personnel Hazards: sharp edged tools, hazardous surfaces, physical hazards, electrical hazards, health hazards from chemicals and other such toxic material etc.	1	2	-	-
<b>PC7.</b> undertake first aid activities in case of any accident, if required and asked to do so	-	3	-	-
<b>PC8.</b> select and use appropriate personal protective equipment compatible to the work and compliant to relevant occupational health and safety guidelines Personal Protective Equipment: masks, safety glasses, head protection, ear muffs, safety footwear, gloves, aprons etc.	-	3	-	-
<b>PC9.</b> maintain correct body posture while standing and working for long hours and carrying heavy materials	-	3	-	-
<b>PC10.</b> lift, carry or move heavy wooden furniture and accessories from one place to another using approved safe working practices	2	2	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> handle all required tools, machines , materials & equipment safely	2	2	-	-
<b>PC12.</b> adhere to relevant occupational safety policies while handling sharp tools to make and install furniture and fittings	-	3	-	-
<b>PC13.</b> take safety measures while handling glass, heavy wood, materials, chemicals etc.	-	3	-	-
<b>PC14.</b> apply good housekeeping practices at all times Good Housekeeping Practices: clean/tidy work areas, removal/disposal of waste products, protect surfaces	2	1	-	-
<b>PC15.</b> report accident/incident report to authorized personal	1	2	-	-
<b>PC16.</b> perform basic safety checks before operation of all machines, tools and electrical equipment	2	1	-	-
<b>PC17.</b> follow recommended material handling procedure to control damage and personal injury	1	2	-	-
<b>PC18.</b> follow safe working practices at all times	1	2	-	-
<i>Dealing with Emergencies</i>	<b>13</b>	<b>31</b>	-	-
<b>PC19.</b> follow appropriate procedure in case a of fire emergency	1	2	-	-
<b>PC20.</b> follow electrical safety measures while working with electrically powered tools & equipment	2	2	-	-
<b>PC21.</b> follow agreed work location procedures in the event of an emergency or an accident	1	2	-	-
<b>PC22.</b> follow emergency and evacuation procedures in case of accidents, fires, natural calamities	1	2	-	-
<b>PC23.</b> Check and ensure general health and safety equipment are available at work site. General Health and Safety Equipment: fire extinguishers; first aid equipment; safety instruments and clothing; safety installations (e.g. fire exits, exhaust fans)	1	3	-	-
<b>PC24.</b> Comply with restrictions imposed on harmful chemicals inside work area during working hours	-	3	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC25.</b> correctly demonstrate rescue techniques applied during fire hazard	-	3	-	-
<b>PC26.</b> demonstrate good housekeeping in order to prevent fire hazards	-	3	-	-
<b>PC27.</b> demonstrate the correct use of a fire extinguisher	2	1	-	-
<b>PC28.</b> demonstrate how to free a person from electrocution	1	2	-	-
<b>PC29.</b> respond promptly and appropriately to an accident situation or medical emergency	-	3	-	-
<b>PC30.</b> participate in emergency procedures Emergency Procedures: raising alarm, safe/efficient, evacuation, correct means of escape, correct assembly point, roll call, correct return to work	-	3	-	-
<b>PC31.</b> use the various appropriate fire extinguishers on different types of fires correctly. Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no longer receiving electricity); Class D: combustible metals such as magnesium, titanium, and sodium (These fires burn at extremely high temperatures and require special suppression agents)	1	2	-	-
<b>PC32.</b> state methods of accident prevention in the work environment. Methods of accident prevention: training in health and safety procedures; using health and safety procedures; use of equipment and working practices (such as safe carrying procedures); safety notices, advice; instruction from colleagues and supervisors	3	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FFS/N8601
<b>NOS Name</b>	Ensure health and safety at workplace
<b>Sector</b>	Furniture & Fittings
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	3
<b>Credits</b>	NA
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>NSQC Clearance Date</b>	22/08/2019

## Qualification Pack

### FFS/N8801: Work effectively with others

#### Description

This OS unit is about communicating and coordinating with team members including subordinates and superiors.

#### Scope

This unit/task covers the following:

- Interaction with seniors
- Work effectively

#### Elements and Performance Criteria

##### *Interaction with Seniors*

To be competent, the user/individual on the job must be able to:

- PC1.** seek assistance from supervisor or any such appropriate authority as and when required
- PC2.** ask questions and seek clarifications on work tasks whenever required handling procedures
- PC3.** seek and obtain clarifications on policies and procedures, from the supervisor or other authorized personnel
- PC4.** identify and report any possible deviations to appropriate authority
- PC5.** address the problems effectively and report if required to immediate supervisor appropriately
- PC6.** Receive instructions clearly from superiors and respond effectively on the same
- PC7.** follow escalation matrix in case of any grievance
- PC8.** accurately receive information and instructions from the supervisor related to one's work

##### *Work effectively*

To be competent, the user/individual on the job must be able to:

- PC9.** coordinate and cooperate with colleagues to achieve work objectives
- PC10.** display courteous behaviour at all times
- PC11.** respond politely to customer queries and other team members
- PC12.** follow work place dress code
- PC13.** keep work area in a tidy and organized state
- PC14.** adhere to time lines and quality standards
- PC15.** follow organizational policies and procedures
- PC16.** share information with team wherever and whenever required to enhance quality and productivity at work place
- PC17.** work together with co-workers in a synchronized manner
- PC18.** communicate with others clearly, at a pace and in a manner that helps them to understand
- PC19.** show respect to other and their work
- PC20.** display active listening skills while interacting with others at work

## Qualification Pack

**PC21.** Demonstrate responsible and disciplined behaviors at the workplace disciplined behaviors: e.g. punctuality; completing tasks as per given time and standards; not gossiping and idling time; eliminating waste, honesty, etc.

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

1. legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions
2. reporting structure, inter-dependent functions, lines and procedures in the work area
3. relevant people and their responsibilities within the work area
4. escalation matrix and procedures for reporting work and employment relate issue clarifications and support
5. importance of working effectively with others to achieve organizations goals
6. importance of effective communication and establishing good working relationships with other
7. responsibilities and objectives of the role
8. own roles and responsibilities
9. principle of furniture and fittings manufacturing and installation
10. importance of having correct understanding of work task and objective
11. how to keep work area clean and tidy and its importance
12. applicable quality standards for assigned work task and objective
13. Reporting procedure in case of deviations
14. importance and need of supporting co-workers facing problems for smooth functioning of work
15. different type of people that one is required to communicate and coordinate within the organization
16. various components of communication cycle
17. importance of active listening
18. importance of discipline and ethics for professional success
19. what constitutes disciplined behavior for a working professional
20. expressing and addressing grievances appropriately and effectively
21. importance and ways of managing interpersonal conflict effectively

### Generic Skills (GS)

User/individual on the job needs to know how to:

1. write in Hindi or local language
2. fill formats, logs and forms related to work in local language or Hindi/English
3. document measurement appropriately whenever required
4. read instructions from supervisor provided in local language or Hindi
5. read and understand manufacturers instructions and job specifications
6. interpret pictorial representations and written signs or instructions

## Qualification Pack

7. read and interpret numbers written in Hindi or local language
8. understand safety symbols and basic warning signs wherever needed
9. communicate effectively with team members, supervisors, managers etc.
10. seek clarification on any unclear instructions in locally understood language
11. take decisions of once own roles and responsibilities
12. decide on material requirement for related to once work
13. decide on to accept or reject a work piece on the basis of quality parameter
14. Plan and organize own work in a way that all activities are completed in time and as per specifications
15. plan word as per job specification
16. plan and organize cleaning and maintenance activities
17. work and deliver output as per client requirement and satisfaction
18. identify any defects in materials, tools and equipment and ways to resolve them
19. determine timely correction of errors to minimize rejection of pieces or rework
20. analyse the situation and take appropriate actions while dealing with team members
21. analyse, evaluate and apply the information gathered from observation, experience, reasoning, or communication to act efficiently

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interaction with Seniors</i>	<b>18</b>	<b>15</b>	-	-
<b>PC1.</b> seek assistance from supervisor or any such appropriate authority as and when required	1	2	-	-
<b>PC2.</b> ask questions and seek clarifications on work tasks whenever required handling procedures	1	2	-	-
<b>PC3.</b> seek and obtain clarifications on policies and procedures, from the supervisor or other authorized personnel	5	-	-	-
<b>PC4.</b> identify and report any possible deviations to appropriate authority	1	2	-	-
<b>PC5.</b> address the problems effectively and report if required to immediate supervisor appropriately	2	3	-	-
<b>PC6.</b> Receive instructions clearly from superiors and respond effectively on the same	1	2	-	-
<b>PC7.</b> follow escalation matrix in case of any grievance	4	2	-	-
<b>PC8.</b> accurately receive information and instructions from the supervisor related to one's work	3	2	-	-
<i>Work effectively</i>	<b>12</b>	<b>55</b>	-	-
<b>PC9.</b> coordinate and cooperate with colleagues to achieve work objectives	-	5	-	-
<b>PC10.</b> display courteous behaviour at all times	-	5	-	-
<b>PC11.</b> respond politely to customer queries and other team members	1	4	-	-
<b>PC12.</b> follow work place dress code	-	5	-	-
<b>PC13.</b> keep work area in a tidy and organized state	-	5	-	-
<b>PC14.</b> adhere to time lines and quality standards	2	3	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC15.</b> follow organizational policies and procedures	4	-	-	-
<b>PC16.</b> share information with team wherever and whenever required to enhance quality and productivity at work place	2	3	-	-
<b>PC17.</b> work together with co-workers in a synchronized manner	-	6	-	-
<b>PC18.</b> communicate with others clearly, at a pace and in a manner that helps them to understand	3	3	-	-
<b>PC19.</b> show respect to other and their work	-	5	-	-
<b>PC20.</b> display active listening skills while interacting with others at work	-	5	-	-
<b>PC21.</b> Demonstrate responsible and disciplined behaviors at the workplace disciplined behaviors: e.g. punctuality; completing tasks as per given time and standards; not gossiping and idling time; eliminating waste, honesty, etc.	-	6	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FFS/N8801
<b>NOS Name</b>	Work effectively with others
<b>Sector</b>	Furniture & Fittings
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	3
<b>Credits</b>	NA
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>NSQC Clearance Date</b>	22/08/2019

## Qualification Pack

### FFS/N0119: Staining and polishing wooden furniture

#### Description

This unit is about preparation of wooden surface, staining, polishing and applying finishing coat.

#### Scope

This unit/task covers the following:

- Preparation of wooden surface for staining/polishing
- Assist polisher in staining and applying of surface coat
- Assist polisher in applying top/finish coat on wooden surface
- Assist lead/senior in applying other finishing techniques on wooden surface
- Check quality of output

#### Elements and Performance Criteria

##### *Preparation of wooden surface for staining/polishing*

To be competent, the user/individual on the job must be able to:

- PC1.** obtain the specifications of furniture finish from client/lead
- PC2.** decide the wood finishing techniques to be used to get the desired finishes.
- PC3.** list out required tools and accordingly arrange for them such as brushes, scrapers, sand papers, putty, stainer, thinner blades, spray gun and machines etc.
- PC4.** check if required tools and equipment/machines are in proper working condition
- PC5.** select and organise/procure for the appropriate materials and mixing ingredients such as stainer, chalk mitti, putty, water, base colour, varnishes etc
- PC6.** report on any shortage or defect of raw materials to the concerned person and undertake procurement as needed
- PC7.** clean the work area before starting the process
- PC8.** clean the furniture surface and remove if any adhesive, dirt etc. is left on the surface
- PC9.** check for any defect like nail head on wooden surface, blemishes such as nail holes, or split in the wood etc. and assist in smoothening the surface by hammering nail heads, filling the blemishes with fillers or putty or sealer coat of shellac mixed with spirit.
- PC10.** apply sand paper of different grit along the wooden grain to smooth the wooden surface.
- PC11.** clean the surface by applying vacuum to remove all trace of dust, grit and wipe the surface with rag dampened with paint thinner
- PC12.** remove the paint/polish by applying paint remover/thinner evenly on the surface of furniture using bristle brush if furniture is old and painted

##### *Assist polisher in staining and applying surface coat*

To be competent, the user/individual on the job must be able to:

- PC13.** check all the surface preparation work such as sanding, filling and cleaning are completed as per required finishing specification
- PC14.** assess the requirement and decide on the use of water stain or oil stain

## Qualification Pack

- PC15.** arrange the required colour of pigmented powder or liquid stainer etc. and prepare the staining material using appropriate solvent (water or oil)
- PC16.** assist lead/seniors in applying of stain on wooden surface of furniture piece
- PC17.** apply sand paper of fine grit and assist in applying another coat of stain
- PC18.** assess surface coating material requirement .i.e. varnish, shellac or lacquer finish, prepare and mix with required consistency
- PC19.** assist lead/seniors in applying of surface coating work and ensure work-piece achieves the required characteristics and meets the finishing specification

### *Assist polisher in applying top/finish coat on wooden surface*

To be competent, the user/individual on the job must be able to:

- PC20.** discuss the nature of work and finishes such as matt, satin or glossy finish etc. and follow the instruction of lead/seniors on the job
- PC21.** check all the staining and surface coating completed to ensure it is as per required finishing specification
- PC22.** mix the top coat liquid with appropriate thinner and hardener place appropriately for application
- PC23.** fill prepared mixture in spray gun in appropriate manner
- PC24.** assist senior in spray of top coat on the wooden surface
- PC25.** let the surface dry and rub the work surface to remove dust, etc., formed on the surface after spraying of top coat

### *Assist lead/seniors to apply other finishing techniques on wooden surface*

To be competent, the user/individual on the job must be able to:

- PC26.** assist lead/senior in applying of glazing and toning techniques used to highlight the details in the woodwork
- PC27.** assist senior in applying of pickling or liming traditional finishing processes used to accentuate the wood grain, by using two contrasting colours
- PC28.** support in applying of bleaching techniques used to lighten the natural colour of wood or to remove discoloration caused by moisture

### *Check quality of output*

To be competent, the user/individual on the job must be able to:

- PC29.** conduct a visual check and rectify any errors to ensure delivery is as per standards
- PC30.** gather all the tools post work completion and place accordingly
- PC31.** ensure minimal wastage of material .
- PC32.** remove all the debris from the site and clean the work area in accordance with organization policy
- PC33.** take note of inputs/ feedback received during work to incorporate in future

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

1. the organizations rules, codes, guidelines and standards.
2. various types of products and services offered

## Qualification Pack

3. organizational policies, manuals, rules and regulations
4. contact person in case of queries on procedure or products.
5. common hazards in the work area and relevant safety and security procedures/manuals to be followed
6. method to handle tools and equipment safely and the health and safety implications of not doing so
7. proper disposal system for waste and by-product.
8. code of conduct and escalation hierarchy.
9. work specifications and interpret them accurately
10. product and workplace safety specifications
11. terminologies used in products and components.
12. usage and safe handling of tools and equipments like sanding machine, cleaning equipments, brush, roller etc
13. different types of sand paper and their use for fine sanding while avoiding wastage beyond accepted levels.
14. smoothening surface and filling blemishes using fillers etc
15. different types of masking tapes and their application
16. different types of water or oil based stainer and applications.
17. different types of surface finishes matt, gloss or satin finishes and their suitability to different weather conditions
18. selecting and mixing paint materials or pigment, oils and other ingredients in proper proportions to obtain desired colour, shade and consistency
19. how to cover all the surface which need not to be painted/polish
20. common causes and common symptoms of poor base coat application or poor polishing /painting
21. distance to be maintained while spraying
22. number of coats to be applied for optimum results basis the material
23. visual inspection for any aberrations, bubbles or undulations
24. trouble shooting common issues faced w.r.t material application, equipments
25. safe working practices for cleaning work area, tools and the method of carrying them out.
26. safety standards and precautions to be taken and different types of personal protective gear and their usage
27. quality standards to be maintained.
28. standard operating procedure
29. market trends and customer preference
30. about different types of wood and their properties
31. proper ventilation, environment /atmosphere conditions for working

### Generic Skills (GS)

User/individual on the job needs to know how to:

## Qualification Pack

1. write in english/ local language design /notes as applicable
2. note the information received / communicate observations, if any
3. read and understand the labelling codes/package details as per company procedures
4. read and interpret the process required for conducting the assigned work.
5. read and understand designs, manuals, health and safety, instructions, memos, reports, job cards, organization policy documents
6. discuss task lists, schedules and activities
7. effectively communicate with team members and customers.
8. attentively listen and comprehend the information given by the seniors
9. communicate clearly on the issues being faced and clarify queries
10. share best practices with peers.
11. ability to troubleshoot common concerns faced.
12. take appropriate decisions related to own responsibilities to deliver within prescribed time and as per quality standards
13. plan ,organize and prioritize the work order and jobs received
14. ability to organize and conduct work in optimal manner
15. plan to utilize time and equipment's effectively
16. ability to concentrate on task and ability to complete with time limits
17. assist in record keeping and proper documentation
18. understand customer requirements and time lines and respond as per their needs
19. being courteous with customers
20. being aware of different customer cultures/faiths and responding appropriately.
21. support lead/manager in solving problems by detailing and discussing the possible solutions
22. ability to quickly identify common causes of errors and help in resolution.
23. identify emergency situations and accordingly respond
24. apply domain information/knowledge and assess day to day tasks through experience and observation, to identify control measures to solve issues
25. use reasoning skills to identify basic problems
26. apply the information gathered from observation

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Preparation of wooden surface for staining/polishing</i>	<b>11</b>	<b>29</b>	-	-
<b>PC1.</b> obtain the specifications of furniture finish from client/lead	1	3	-	-
<b>PC2.</b> decide the wood finishing techniques to be used to get the desired finishes.	1	3	-	-
<b>PC3.</b> list out required tools and accordingly arrange for them such as brushes, scrapers, sand papers, putty, stainer, thinner blades, spray gun and machines etc.	1	2	-	-
<b>PC4.</b> check if required tools and equipment/machines are in proper working condition	-	2	-	-
<b>PC5.</b> select and organise/procure for the appropriate materials and mixing ingredients such as stainer, chalk mitti, putty, water, base colour, varnishes etc	1	2	-	-
<b>PC6.</b> report on any shortage or defect of raw materials to the concerned person and undertake procurement as needed	1	2	-	-
<b>PC7.</b> clean the work area before starting the process	1	2	-	-
<b>PC8.</b> clean the furniture surface and remove if any adhesive, dirt etc. is left on the surface	1	3	-	-
<b>PC9.</b> check for any defect like nail head on wooden surface , blemishes such as nail holes, or split in the wood etc. and assist in smoothing the surface by hammering nail heads, filling the blemishes with fillers or putty or sealer coat of shellac mixed with sprit.	1	2	-	-
<b>PC10.</b> apply sand paper of different grit along the wooden grain to smooth the wooden surface.	1	3	-	-
<b>PC11.</b> clean the surface by applying vacuum to remove all trace of dust , grit and wipe the surface with rag dampened with paint thinner	1	3	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> remove the paint/polish by applying paint remover/thinner evenly on the surface of furniture using bristle brush if furniture is old and painted	1	2	-	-
<i>Assist polisher in staining and applying surface coat</i>	<b>6</b>	<b>14</b>	-	-
<b>PC13.</b> check all the surface preparation work such as sanding, filling and cleaning are completed as per required finishing specification	-	2	-	-
<b>PC14.</b> assess the requirement and decide on the use of water stain or oil stain	1	2	-	-
<b>PC15.</b> arrange the required colour of pigmented powder or liquid stainer etc. and prepare the staining material using appropriate solvent (water or oil)	1	2	-	-
<b>PC16.</b> assist lead/seniors in applying of stain on wooden surface of furniture piece	1	2	-	-
<b>PC17.</b> apply sand paper of fine grit and assist in applying another coat of stain	1	2	-	-
<b>PC18.</b> assess surface coating material requirement .i.e. varnish, shellac or lacquer finish, prepare and mix with required consistency	1	2	-	-
<b>PC19.</b> assist lead/seniors in applying of surface coating work and ensure work-piece achieves the required characteristics and meets the finishing specification	1	2	-	-
<i>Assist polisher in applying top/finish coat on wooden surface</i>	<b>6</b>	<b>13</b>	-	-
<b>PC20.</b> discuss the nature of work and finishes such as matt, satin or glossy finish etc. and follow the instruction of lead/seniors on the job	1	3	-	-
<b>PC21.</b> check all the staining and surface coating completed to ensure it is as per required finishing specification	1	2	-	-
<b>PC22.</b> mix the top coat liquid with appropriate thinner and hardener place appropriately for application	1	2	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC23.</b> fill prepared mixture in spray gun in appropriate manner	1	2	-	-
<b>PC24.</b> assist senior in spray of top coat on the wooden surface	1	2	-	-
<b>PC25.</b> let the surface dry and rub the work surface to remove dust, etc., formed on the surface after spraying of top coat	1	2	-	-
<i>Assist lead/seniors to apply other finishing techniques on wooden surface</i>	<b>3</b>	<b>6</b>	-	-
<b>PC26.</b> assist lead/senior in applying of glazing and toning techniques used to highlight the details in the woodwork	1	2	-	-
<b>PC27.</b> assist senior in applying of pickling of liming traditional finishing processes used to accentuate the wood grain, by using two contrasting colours	1	2	-	-
<b>PC28.</b> support in applying of bleaching techniques used to lighten the natural colour of wood or to remove discoloration caused by moisture	1	2	-	-
<i>Check quality of output</i>	<b>4</b>	<b>8</b>	-	-
<b>PC29.</b> conduct a visual check and rectify any errors to ensure delivery is as per standards	1	1	-	-
<b>PC30.</b> gather all the tools post work completion and place accordingly	1	1	-	-
<b>PC31.</b> ensure minimal wastage of material .	1	2	-	-
<b>PC32.</b> remove all the debris from the site and clean the work area in accordance with organization policy	1	2	-	-
<b>PC33.</b> take note of inputs/ feedback received during work to incorporate in future	-	2	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FFS/N0119
<b>NOS Name</b>	Staining and polishing wooden furniture
<b>Sector</b>	Furniture & Fittings
<b>Sub-Sector</b>	Wooden /Metal Furniture
<b>Occupation</b>	Production- Furniture Finisher
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>NSQC Clearance Date</b>	22/08/2019

## Qualification Pack

### FFS/N0120: Painting wooden furniture

#### Description

This unit is about preparation of wooden surface, staining, polishing and applying finishing coat.

#### Scope

This unit/task covers the following:

- Preparation of wooden surface for painting
- Apply primer on wooden surface
- Assist in application of paint/top coat on wooden surface
- Check quality of output

#### Elements and Performance Criteria

##### *Preparation of wooden surface for painting*

To be competent, the user/individual on the job must be able to:

- PC1.** obtain the specifications of furniture finish from client/lead
- PC2.** decide the wood finishing techniques to be used to get the desired finishes
- PC3.** list out required tools and accordingly arrange for them such as brushes, rollers, painting bucket, stirrers, scrapers, sand papers, putty blades, spray gun and machines etc.
- PC4.** check if required tools and equipment/machines are in proper working condition
- PC5.** select and organise/procure for the appropriate materials and mixing ingredients such as stainer, chalk mitti, putty, water primer, base colour, tint base, colorants, varnishes, enamel, etc.
- PC6.** report on any shortage or defect of raw materials to the concerned person and undertake procurement as needed
- PC7.** clean the work area before starting the process
- PC8.** place the furniture and clean the furniture surface and remove if any adhesive, dirt etc. remained at the surface
- PC9.** check for any defect like nail head on wooden surface, blemishes such as nail holes, or split in the wood. insert nail heads, and fill the blemishes with fillers or putty or sealer coat of shallec mixed with sprit
- PC10.** apply sand paper of different grit along the wooden grain to smooth the wooden surface
- PC11.** clean the surface by applying vacuum to remove all trace of dust , grit and wipe the surface with rag dampened with paint thinner
- PC12.** remove the paint/polish by applying paint remover evenly on the surface of furniture using bristle brush if furniture is old and painted

##### *Apply primer on wooden surface*

To be competent, the user/individual on the job must be able to:

- PC13.** clean the surface to remove oil/grease/ dust using tag cloth, before applying paint on surface and cover all the surface area which would not be painted using mask paper

## Qualification Pack

**PC14.** assist in spray of primer/use of roller brush on the surface to be painted (e.g. using air spray gun) and wait till primer dries

**PC15.** sand the primed surface and check if any minute holes are left to be filled again and apply another coat of primer on the surface

**PC16.** check visually to ensure even finish

*Assist in application of paint/top coat on wooden surface*

To be competent, the user/individual on the job must be able to:

**PC17.** discuss the nature of work such as colour code and finishes (matt, satin or gloss) etc. and follow the instruction of lead/seniors on the job

*Assist in apply of paint/top coat on wooden surface*

To be competent, the user/individual on the job must be able to:

**PC18.** check all the filling and primer coating done to ensure it is as per required finishing specification

**PC19.** prepare colour/top coat finishes in mentioned ratio of pigment, thinner and hardener as per specification/ instruction given by lead

**PC20.** assist in spray or use of foam roller to paint on the wooden surface using sprayer or use brush to paint the surface as required

**PC21.** remove masking, rub and buff the work surface to remove any grains/particle, etc., formed on the surface after painting

**PC22.** place all the ready product at an appropriate place and remove wastage from site

*Check quality of output*

To be competent, the user/individual on the job must be able to:

**PC23.** conduct a visual check and rectify any errors to ensure delivery is as per standards

**PC24.** gather all the tools post work completion and place accordingly

**PC25.** ensure minimal wastage of material

**PC26.** remove all the debris from the site and clean the work area in accordance with organization policy

**PC27.** take note of inputs/ feedback received during work to incorporate in future

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

1. the organizations rules, codes, guidelines and standards.
2. various types of products and services offered
3. organizational policies, manuals, rules and regulations
4. contact person in case of queries on procedure or products.
5. common hazards in the work area and relevant safety and security procedures/manuals to be followed
6. method to handle tools and equipment safely and the health and safety implications of not doing so
7. proper disposal system for waste and by-product.
8. code of conduct and escalation hierarchy.

## Qualification Pack

9. work specifications and interpret them accurately
10. product and workplace safety specifications
11. terminologies used in products and components.
12. usage and safe handling of tools and equipments like sanding machine, cleaning equipments, brush, roller etc
13. different types of sand paper and their use for fine sanding while avoiding wastage beyond accepted levels.
14. smoothening surface and filling blemishes using fillers etc
15. different types of masking tapes and their application
16. different types of water or oil based stainer and applications.
17. different types of surface finishes matt, gloss or satin finishes and their suitability to different weather conditions
18. selecting and mixing paint materials or pigment, oils and other ingredients in proper proportions to obtain desired colour, shade and consistency
19. how to cover all the surface which need not to be painted/polish
20. common causes and common symptoms of poor base coat application or poor polishing /painting
21. distance to be maintained while spraying
22. number of coats to be applied for optimum results basis the material
23. visual inspection for any aberrations, bubbles or undulations
24. trouble shooting common issues faced w.r.t material application, equipments
25. safe working practices for cleaning work area, tools and the method of carrying them out.
26. safety standards and precautions to be taken and different types of personal protective gear and their usage
27. quality standards to be maintained.
28. standard operating procedure
29. market trends and customer preference
30. about different types of wood and their properties
31. proper ventilation, environment /atmosphere conditions for working

## Generic Skills (GS)

User/individual on the job needs to know how to:

1. write in english/ local language
2. note the information received / communicate observations, if any
3. read and understand the labelling codes/package details as per company procedures
4. read and interpret the process required for conducting the assigned work.
5. read and understand designs, manuals, health and safety, instructions, memos, reports, job cards, organization policy documents
6. discuss task lists, schedules and activities
7. effectively communicate with team members and customers.

## Qualification Pack

8. attentively listen and comprehend the information given by the seniors
9. communicate clearly on the issues being faced and clarify queries
10. share best practices with peers.
11. troubleshoot common concerns faced.
12. take appropriate decisions related to own responsibilities to deliver within prescribed time and as per quality standards
13. plan ,organize and prioritize the work order and jobs received
14. ability to organize and conduct work in optimal manner
15. plan to utilize time and equipment's effectively
16. ability to concentrate on task and ability to complete with time limits
17. assist in record keeping and proper documentation
18. understand customer requirements and time lines and respond as per their needs
19. being courteous with customers
20. being aware of different customer cultures/faiths and responding appropriately.
21. support lead/manager in solving problems by detailing and discussing the possible solutions
22. identify common causes of errors and help in resolution.
23. identify emergency situations and accordingly respond
24. apply domain information/knowledge and assess day to day tasks through experience and observation, to identify control measures to solve issues
25. use reasoning skills to identify basic problems
26. apply the information gathered from observation

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Preparation of wooden surface for painting</i>	<b>12</b>	<b>32</b>	-	-
<b>PC1.</b> obtain the specifications of furniture finish from client/lead	1	3	-	-
<b>PC2.</b> decide the wood finishing techniques to be used to get the desired finishes	1	3	-	-
<b>PC3.</b> list out required tools and accordingly arrange for them such as brushes, rollers, painting bucket, stirrers, scrapers, sand papers, putty blades, spray gun and machines etc.	1	2	-	-
<b>PC4.</b> check if required tools and equipment/machines are in proper working condition	1	2	-	-
<b>PC5.</b> select and organise/procure for the appropriate materials and mixing ingredients such as stainer, chalk mitti, putty, water primer, base colour, tint base, colorants, varnishes, enamel, etc.	1	3	-	-
<b>PC6.</b> report on any shortage or defect of raw materials to the concerned person and undertake procurement as needed	1	2	-	-
<b>PC7.</b> clean the work area before starting the process	1	2	-	-
<b>PC8.</b> place the furniture and clean the furniture surface and remove if any adhesive, dirt etc. remained at the surface	1	2	-	-
<b>PC9.</b> check for any defect like nail head on wooden surface, blemishes such as nail holes, or split in the wood. insert nail heads, and fill the blemishes with fillers or putty or sealer coat of shaltec mixed with sprit	1	4	-	-
<b>PC10.</b> apply sand paper of different grit along the wooden grain to smooth the wooden surface	1	3	-	-
<b>PC11.</b> clean the surface by applying vacuum to remove all trace of dust , grit and wipe the surface with rag dampened with paint thinner	1	3	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> remove the paint/polish by applying paint remover evenly on the surface of furniture using bristle brush if furniture is old and painted	1	3	-	-
<i>Apply primer on wooden surface</i>	<b>4</b>	<b>12</b>	-	-
<b>PC13.</b> clean the surface to remove oil/grease/ dust using tag cloth, before applying paint on surface and cover all the surface area which would not be painted using mask paper	1	3	-	-
<b>PC14.</b> assist in spray of primer/use of roller brush on the surface to be painted (e.g. using air spray gun) and wait till primer dries	1	4	-	-
<b>PC15.</b> sand the primed surface and check if any minute holes are left to be filled again and apply another coat of primer on the surface	1	3	-	-
<b>PC16.</b> check visually to ensure even finish	1	2	-	-
<i>Assist in application of paint/top coat on wooden surface</i>	<b>1</b>	<b>3</b>	-	-
<b>PC17.</b> discuss the nature of work such as colour code and finishes (matt, satin or gloss) etc. and follow the instruction of lead/seniors on the job	1	3	-	-
<i>Assist in apply of paint/top coat on wooden surface</i>	<b>5</b>	<b>15</b>	-	-
<b>PC18.</b> check all the filling and primer coating done to ensure it is as per required finishing specification	1	2	-	-
<b>PC19.</b> prepare colour/top coat finishes in mentioned ratio of pigment, thinner and hardener as per specification/ instruction given by lead	1	3	-	-
<b>PC20.</b> assist in spray or use of foam roller to paint on the wooden surface using sprayer or use brush to paint the surface as required	1	4	-	-
<b>PC21.</b> remove masking, rub and buff the work surface to remove any grains/particle, etc., formed on the surface after painting	1	4	-	-
<b>PC22.</b> place all the ready product at an appropriate place and remove wastage from site	1	2	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Check quality of output</i>	8	8	-	-
<b>PC23.</b> conduct a visual check and rectify any errors to ensure delivery is as per standards	2	2	-	-
<b>PC24.</b> gather all the tools post work completion and place accordingly	2	2	-	-
<b>PC25.</b> ensure minimal wastage of material	1	1	-	-
<b>PC26.</b> remove all the debris from the site and clean the work area in accordance with organization policy	1	2	-	-
<b>PC27.</b> take note of inputs/ feedback received during work to incorporate in future	2	1	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FFS/N0120
<b>NOS Name</b>	Painting wooden furniture
<b>Sector</b>	Furniture & Fittings
<b>Sub-Sector</b>	Wooden /Metal Furniture
<b>Occupation</b>	Production- Furniture Finisher
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>NSQC Clearance Date</b>	22/08/2019

## Qualification Pack

### FFS/N2101: Painting/ polishing metallic/ steel fabricated furniture

#### Description

This unit is about doing finishing work on metal furniture by preparation of surface for painting /polishing and applying paint to provide desired finish.

#### Scope

This unit/task covers the following:

- Preparation of metallic surface for painting/polishing
- Assist in apply of putty, primer and paint the metallic surface of furniture
- Check quality of output

#### Elements and Performance Criteria

##### *Preparation of metallic surface for painting/polishing*

To be competent, the user/individual on the job must be able to:

- PC1.** obtain specifications of furniture finish from client/lead
- PC2.** list out required tools and accordingly arrange them such as brushes, rollers, painting bucket, stirrers, scrapers, sand papers, putty blades, spray gun and machines etc.
- PC3.** check if required tools and equipment/machines are in proper working condition
- PC4.** select and arrange/procure the appropriate materials and mixing ingredients such as stainer, chalk mitti, putty, water primer, base colour, tint base, colorants, varnishes, enamel, etc.
- PC5.** report on any shortage or defect of raw materials to the concerned person
- PC6.** clean the work area before starting the process
- PC7.** place the furniture in an appropriate manner and wipe/clean the furniture surface to remove any adhesive, dirt etc.
- PC8.** clean and sand the metallic furniture to remove all loose mill scale, loose rust, loose paint from the surface
- PC9.** clean all bolts, nuts, welds, and field rivet heads etc. and remove rust (rust scale), weld slag, flux and weld spatter by use of appropriate tools such as rotary or impact power tools
- PC10.** remove the paint/polish by applying paint remover evenly on the surface of furniture using bristle brush if furniture is old and painted
- PC11.** remove all the fittings such as handles, lock etc. from the furniture, if fitted
- PC12.** clean the surface applying vacuum to remove all trace of dust and grit before applying paint/primer

##### *Assist in applying putty, primer and paint on the metallic surface of furniture*

To be competent, the user/individual on the job must be able to:

- PC13.** fill blemishes or any depressions, holes on metallic surface by spreading putty evenly on the surface using plastic/steel spreader
- PC14.** allow putty to dry as per company standards and apply sand paper on the surface where putty is applied to level the surface

## Qualification Pack

- PC15.** clean the surface to remove oil/grease/ dust using tag cloth and cover all the surface area of furniture which need not to be painted, using mask paper
  - PC16.** spray or brush primer on the surface to be painted using air spray gun or paint brush
  - PC17.** apply specified number of coats of appropriate primer to prevent any oxidization on metal and allow appropriate drying time between two subsequent primer coats as per company standards
  - PC18.** check visually at regular intervals for even finish and to avoid later detection of any error
  - PC19.** prepare colour in mentioned ratio of pigment, thinner and hardener by following standard procedure for effective mixing and dilution of paints and adding reducer/thinner/ water to adjust viscosity of paint mix as per requirement
  - PC20.** fill the paint in the fluid container and adjust controls for pressure in fluid container and size of the fluid orifice
  - PC21.** spray paint on the metal surface in the designated paint area
  - PC22.** apply appropriate coats of paint as per the requirements/specification and ensure appropriate drying time between two subsequent coats
  - PC23.** remove masking and rub the work surface to remove any dust, etc., formed on the surface after spraying of paint coat
  - PC24.** polish the surface by buffing and check quality of finish
- Check of quality output*
- To be competent, the user/individual on the job must be able to:
- PC25.** conduct a visual check and rectify any errors to ensure delivery is as per standards z29:aa32
  - PC26.** gather all the tools post work completion and place accordingly
  - PC27.** ensure minimal wastage of material
  - PC28.** remove all the debris from the site and clean the work area in accordance with organization policy
  - PC29.** take note of inputs/ feedback received during work to incorporate in future

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

1. the organizations rules, codes, guidelines and standards.
2. various types of products and services offered
3. organizational policies, manuals, rules and regulations
4. contact person in case of queries on procedure or products.
5. common hazards in the work area and relevant safety and security procedures/manuals to be followed
6. method to handle tools and equipment safely and the health and safety implications of not doing so
7. proper disposal system for waste and by-product.
8. code of conduct and escalation hierarchy.
9. work specifications and interpret them accurately
10. product usage and safety specifications

## Qualification Pack

11. terminologies used in products and components.
12. use of sanding machine
13. different types of sand paper and their use for fine sanding while avoiding wastage beyond accepted levels.
14. different types of masking tapes and their application.
15. knowledge and ability to select & use different painting tools (such as brushes, rollers, painting bucket, stirrers, scrapers, sand papers, putty blades, etc.) and appropriate paint materials and mixing ingredients (such as scrape, primer, base colour, tint base, colorants, varnishes, enamel, etc.)
16. standard size of all painting tools, materials and components
17. usage and safe handling of tools while using for painting on metallic surface. e.g. how to set up and operate rotary or impact power tools
18. importance of preventing the formation of burrs, sharp ridges and sharp cuts
19. ability to identify welding defects such as flux, weld spatter and surface defects and how to hide the defects while painting.
20. knowledge of different types of primers such as zinc chromate primer, arrow and ball metal primer etc. and their application
21. knowledge of mixing the correct amount of paint material as per specified ratio and adjusting viscosity of paint mix as per requirement.
22. adhesives used for binding coats of paint such as oil, turpentine, mildew remover.
23. knowledge about different types of metal and their properties
24. have knowledge to ensure proper ventilation, environment /atmosphere conditions for working
25. common causes and symptoms of poor base coat application
26. knowledge of distance to be maintained while spraying
27. number of coats to be applied.
28. ability to do visual inspection for any aberrations, bubbles or undulations.
29. common causes and symptoms of poor painting
30. common issues troubleshooting knowledge and common faults encountered with equipments and the methods to rectify them.
31. safety standards and precautions to be taken and different types of personal protective equipment and their usage
32. quality standards to be maintained
33. standard operating procedure.
  - market trends and customer preference.

## Generic Skills (GS)

User/individual on the job needs to know how to:

1. write in english/ local language
2. note the information received / communicate observations, if any
3. read and understand the labelling codes/package details as per company procedures
4. read and interpret the process required for conducting the assigned work.

## Qualification Pack

5. read and understand designs, manuals, health and safety, instructions, memos, reports, job cards, organization policy documents
6. discuss task lists, schedules and activities
7. effectively communicate with team members and customers.
8. attentively listen and comprehend the information given by the seniors
9. communicate clearly on the issues being faced and clarify queries
10. share best practices with peers.
11. ability to troubleshoot common concerns faced.
12. take appropriate decisions related to own responsibilities to deliver within prescribed time and as per quality standards
13. plan ,organize and prioritize the work order and jobs received
14. ability to organize and conduct work in optimal manner
15. plan to utilize time and equipment's effectively
16. ability to concentrate on task and ability to complete with time limits
17. assist in record keeping and proper documentation
18. understand customer requirements and time lines and respond as per their needs
19. being courteous with customers
20. being aware of different customer cultures/faiths and responding appropriately.
21. support lead/manager in solving problems by detailing and discussing the possible solutions
22. ability to quickly identify common causes of errors and help in resolution.
23. identify emergency situations and accordingly respond
24. understand the importance of following the organizational rules and procedures.
25. apply domain information/knowledge and assess day to day tasks through experience and observation, to identify control measures to solve issues
26. use reasoning skills to identify basic problems
27. apply the information gathered from observation

## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Preparation of metallic surface for painting/polishing</i>	<b>12</b>	<b>28</b>	-	-
<b>PC1.</b> obtain specifications of furniture finish from client/lead	1	3	-	-
<b>PC2.</b> list out required tools and accordingly arrange them such as brushes, rollers, painting bucket, stirrers, scrapers, sand papers, putty blades, spray gun and machines etc.	1	3	-	-
<b>PC3.</b> check if required tools and equipment/machines are in proper working condition	1	2	-	-
<b>PC4.</b> select and arrange/procure the appropriate materials and mixing ingredients such as stainer, chalk mitti, putty, water primer, base colour, tint base, colorants, varnishes, enamel, etc.	1	2	-	-
<b>PC5.</b> report on any shortage or defect of raw materials to the concerned person	1	2	-	-
<b>PC6.</b> clean the work area before starting the process	1	2	-	-
<b>PC7.</b> place the furniture in an appropriate manner and wipe/clean the furniture surface to remove any adhesive, dirt etc.	1	2	-	-
<b>PC8.</b> clean and sand the metallic furniture to remove all loose mill scale, loose rust, loose paint from the surface	1	2	-	-
<b>PC9.</b> clean all bolts, nuts, welds, and field rivet heads etc. and remove rust (rust scale), weld slag, flux and weld spatter by use of appropriate tools such as rotary or impact power tools	1	2	-	-
<b>PC10.</b> remove the paint/polish by applying paint remover evenly on the surface of furniture using bristle brush if furniture is old and painted	1	3	-	-
<b>PC11.</b> remove all the fittings such as handles, lock etc. from the furniture, if fitted	1	2	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> clean the surface applying vacuum to remove all trace of dust and grit before applying paint/primer	1	3	-	-
<i>Assist in applying putty, primer and paint on the metallic surface of furniture</i>	<b>12</b>	<b>33</b>	-	-
<b>PC13.</b> fill blemishes or any depressions, holes on metallic surface by spreading putty evenly on the surface using plastic/steel spreader	1	3	-	-
<b>PC14.</b> allow putty to dry as per company standards and apply sand paper on the surface where putty is applied to level the surface	1	3	-	-
<b>PC15.</b> clean the surface to remove oil/grease/ dust using tag cloth and cover all the surface area of furniture which need not to be painted, using mask paper	1	3	-	-
<b>PC16.</b> spray or brush primer on the surface to be painted using air spray gun or paint brush	1	3	-	-
<b>PC17.</b> apply specified number of coats of appropriate primer to prevent any oxidization on metal and allow appropriate drying time between two subsequent primer coats as per company standards	1	3	-	-
<b>PC18.</b> check visually at regular intervals for even finish and to avoid later detection of any error	1	2	-	-
<b>PC19.</b> prepare colour in mentioned ratio of pigment, thinner and hardener by following standard procedure for effective mixing and dilution of paints and adding reducer/thinner/ water to adjust viscosity of paint mix as per requirement	1	3	-	-
<b>PC20.</b> fill the paint in the fluid container and adjust controls for pressure in fluid container and size of the fluid orifice	1	2	-	-
<b>PC21.</b> spray paint on the metal surface in the designated paint area	1	4	-	-
<b>PC22.</b> apply appropriate coats of paint as per the requirements/specification and ensure appropriate drying time between two subsequent coats	1	3	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC23.</b> remove masking and rub the work surface to remove any dust, etc., formed on the surface after spraying of paint coat	1	2	-	-
<b>PC24.</b> polish the surface by buffing and check quality of finish	1	2	-	-
<i>Check of quality output</i>	<b>6</b>	<b>9</b>	-	-
<b>PC25.</b> conduct a visual check and rectify any errors to ensure delivery is as per standards z29:aa32	1	2	-	-
<b>PC26.</b> gather all the tools post work completion and place accordingly	1	2	-	-
<b>PC27.</b> ensure minimal wastage of material	1	2	-	-
<b>PC28.</b> remove all the debris from the site and clean the work area in accordance with organization policy	1	2	-	-
<b>PC29.</b> take note of inputs/ feedback received during work to incorporate in future	2	1	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FFS/N2101
<b>NOS Name</b>	Painting/ polishing metallic/ steel fabricated furniture
<b>Sector</b>	Furniture & Fittings
<b>Sub-Sector</b>	Wooden /Metal Furniture
<b>Occupation</b>	Production- Furniture Finisher
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>NSQC Clearance Date</b>	22/08/2019

## Qualification Pack

### FFS/N2102: Powder coating metallic/ steel fabricated furniture

#### Description

This unit is about doing finishing work on metal furniture by powder coating to provide desired finish

#### Scope

This unit/task covers the following:

- Preparation of finishing work
- Assist in powder application and curing
- Check quality of output

#### Elements and Performance Criteria

##### *Preparation of finishing work*

To be competent, the user/individual on the job must be able to:

- PC1.** obtain the specifications of furniture powder colour coat and finish from client/lead
- PC2.** decide the finishing techniques to be used to get the desired finishes i.e. applying of thermosets powder coat process or thermoplastics powder coat process
- PC3.** list out required tools and machines and accordingly arrange them, such as brushes, scrapers, sand papers, spray gun etc.
- PC4.** check if required tools and equipment/machines are in proper working condition
- PC5.** select and arrange/procure the appropriate materials and mixing ingredients
- PC6.** report on any shortage or defect of raw materials to the concerned person.
- PC7.** clean the work area before starting the process
- PC8.** separate out the fittings incase fitted and other furniture parts, any clamps, bolts etc that are not required to be coated from the metal furniture
- PC9.** clean the base metal of furniture piece thoroughly using beads or abrasive blasting to remove mill, rust scale and dirt etc.
- PC10.** apply sandpaper or tools like bench grinder etc. to even out the surface as needed and clean the surface off the excess material
- PC11.** apply chemical solvent to remove any grease, oil, or paint from furniture and for further protection and improving the surface, before applying powder coat on surface. for instance, apply acetone on the surface or wipe the surface with rag soaked in acetone and ensure to dry by air drying or in an oven

##### *Assist in powder application and curing*

To be competent, the user/individual on the job must be able to:

- PC12.** place the furniture in appropriate manner in the designated paint booth/ area
- PC13.** pick the colour approved and place it as per selected machine i.e spray gun or compressed air spray.
- PC14.** spray the powder coat to the furniture surface
- PC15.** check visually to ensure even powder coating work and has covered all the exposed surface of metal furniture

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- PC16.** cure the furniture at an agreed norm temperature, e.g. between 175 to 190c or as appropriate ,by using any flame less heat source
- PC17.** allow furniture piece to cool
- PC18.** check quality of finish and ensure that the work-piece achieves the required characteristics and meets the finishing specification
- PC19.** re assemble all the furniture fittings and place the ready product in an appropriate manner

### *Check quality of output*

To be competent, the user/individual on the job must be able to:

- PC20.** check quality of finish and rectify any errors to ensure that the work-piece achieves the required characteristics and meets the finishing specification
- PC21.** gather all the tools post work completion and place accordingly
- PC22.** ensure minimal wastage of material
- PC23.** remove all the debris from the site and clean the work area in accordance with organization policy
- PC24.** take note of inputs/ feedback received during work to incorporate in future

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

1. the organizations rules, codes, guidelines and standards.
2. various types of products and services offered
3. organizational policies, manuals, rules and regulations
4. contact person in case of queries on procedure or products.
5. common hazards in the work area and relevant safety and security procedures/manuals to be followed
6. method to handle tools and equipment safely and the health and safety implications of not doing so
7. proper disposal system for waste and by-product.
8. code of conduct and escalation hierarchy.
9. work specifications and interpret them accurately
10. product and workplace safety specifications
11. terminologies used in products and components.
12. usage of tools and equipments in applying the powder coat via thermosets or thermoplastics process
13. different types of sand paper and their use for fine sanding while avoiding wastage beyond accepted levels.
14. different types of masking tapes and their application
15. knowledge and ability to select & use different painting tools (such as brushes, rollers, painting bucket, stirrers, scrapers, sand papers, putty blades, etc.) and appropriate paint materials and mixing ingredients (such as scrape, primer, base colour, tint base, colorants, varnishes, enamel, etc.)
16. standard size of all painting tools, materials and components

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17. ability to carry out proper cleaning of all bolts, nuts, welds, and field rivet heads
18. knowledge about different types of metal and their properties
19. have knowledge to ensure proper ventilation, environment /atmosphere conditions for working
20. knowledge of distance to be maintained while spraying
21. number of coats to be applied
22. ability to do visual inspection for any aberrations, bubbles or undulations.
23. common causes and symptoms of poor powder coating
24. common issues troubleshooting knowledge and common faults encountered with equipments and the methods to rectify them
25. safety standards and precautions to be taken and different types of personal protective equipment and their usage
26. quality standards to be maintained
27. standard operating procedure.
28. market trends and customer preference.

## Generic Skills (GS)

User/individual on the job needs to know how to:

1. write in english/ local language
2. note the information received / communicate observations, if any
3. read and understand the labelling codes/package details as per company procedures
4. read and interpret the process required for conducting the assigned work.
5. read and understand designs, manuals, health and safety, instructions, memos, reports, job cards, organization policy documents
6. discuss task lists, schedules and activities
7. effectively communicate with team members and customers.
8. attentively listen and comprehend the information given by the seniors
9. communicate clearly on the issues being faced and clarify queries
10. share best practices with peers.
11. ability to troubleshoot common concerns faced.
12. take appropriate decisions related to own responsibilities to deliver within prescribed time and as per quality standards
13. plan ,organize and prioritize the work order and jobs received
14. ability to organize and conduct work in optimal manner
15. plan to utilize time and equipment's effectively
16. ability to concentrate on task and ability to complete with time limits
17. assist in record keeping and proper documentation
18. understand customer requirements and time lines and respond as per their needs
19. being courteous with customers
20. being aware of different customer cultures/faiths and responding appropriately.
21. support lead/manager in solving problems by detailing and discussing the possible solutions

## Qualification Pack

22. ability to quickly identify common causes of errors and help in resolution.
23. identify emergency situations and accordingly respond
24. apply domain information/knowledge and assess day to day tasks through experience and observation, to identify control measures to solve issues
25. use reasoning skills to identify basic problems
26. apply the information gathered from observation

**Qualification Pack**
**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Preparation of finishing work</i>	<b>13</b>	<b>31</b>	-	-
<b>PC1.</b> obtain the specifications of furniture powder colour coat and finish from client/lead	2	2	-	-
<b>PC2.</b> decide the finishing techniques to be used to get the desired finishes i.e. applying of thermosets powder coat process or thermoplastics powder coat process	2	3	-	-
<b>PC3.</b> list out required tools and machines and accordingly arrange them, such as brushes, scrapers, sand papers, spray gun etc.	1	3	-	-
<b>PC4.</b> check if required tools and equipment/machines are in proper working condition	1	2	-	-
<b>PC5.</b> select and arrange/procure the appropriate materials and mixing ingredients	1	3	-	-
<b>PC6.</b> report on any shortage or defect of raw materials to the concerned person.	1	3	-	-
<b>PC7.</b> clean the work area before starting the process	1	2	-	-
<b>PC8.</b> separate out the fittings incase fitted and other furniture parts, any clamps, bolts etc that are not required to be coated from the metal furniture	1	2	-	-
<b>PC9.</b> clean the base metal of furniture piece thoroughly using beads or abrasive blasting to remove mill, rust scale and dirt etc.	1	3	-	-
<b>PC10.</b> apply sandpaper or tools like bench grinder etc. to even out the surface as needed and clean the surface off the excess material	1	4	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> apply chemical solvent to remove any grease, oil, or paint from furniture and for further protection and improving the surface, before applying powder coat on surface. for instance, apply acetone on the surface or wipe the surface with rag soaked in acetone and ensure to dry by air drying or in an oven	1	4	-	-
<i>Assist in powder application and curing</i>	<b>12</b>	<b>26</b>	-	-
<b>PC12.</b> place the furniture in appropriate manner in the designated paint booth/ area	1	3	-	-
<b>PC13.</b> pick the colour approved and place it as per selected machine i.e spray gun or compressed air spray.	2	3	-	-
<b>PC14.</b> spray the powder coat to the furniture surface	2	4	-	-
<b>PC15.</b> check visually to ensure even powder coating work and has covered all the exposed surface of metal furniture	2	3	-	-
<b>PC16.</b> cure the furniture at an agreed norm temperature, e.g. between 175 to 190c or as appropriate ,by using any flame less heat source	2	4	-	-
<b>PC17.</b> allow furniture piece to cool	1	2	-	-
<b>PC18.</b> check quality of finish and ensure that the work-piece achieves the required characteristics and meets the finishing specification	1	3	-	-
<b>PC19.</b> re assemble all the furniture fittings and place the ready product in an appropriate manner	1	4	-	-
<i>Check quality of output</i>	<b>5</b>	<b>13</b>	-	-
<b>PC20.</b> check quality of finish and rectify any errors to ensure that the work-piece achieves the required characteristics and meets the finishing specification	1	3	-	-
<b>PC21.</b> gather all the tools post work completion and place accordingly	1	2	-	-
<b>PC22.</b> ensure minimal wastage of material	1	2	-	-

### Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC23.</b> remove all the debris from the site and clean the work area in accordance with organization policy	1	3	-	-
<b>PC24.</b> take note of inputs/ feedback received during work to incorporate in future	1	3	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-

## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	FFS/N2102
<b>NOS Name</b>	Powder coating metallic/ steel fabricated furniture
<b>Sector</b>	Furniture & Fittings
<b>Sub-Sector</b>	Wooden /Metal Furniture
<b>Occupation</b>	Production- Furniture Finisher
<b>NSQF Level</b>	3
<b>Credits</b>	TBD
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	17/10/2019
<b>Next Review Date</b>	17/10/2023
<b>NSQC Clearance Date</b>	22/08/2019

## Qualification Pack

### Assessment Guidelines and Assessment Weightage

#### Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

**Recommended Pass % : 70**

#### Assessment Weightage

##### Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FFS/N4107.Prepare for finishing bamboo furniture	25	75	-	-	100	25
FFS/N4108.Carry out finishing activities	25	75	-	-	100	25
FFS/N8401.Quality Control	25	75	-	-	100	20
FFS/N8601.Ensure health and safety at workplace	30	70	-	-	100	20
FFS/N8801.Work effectively with others	30	70	-	-	100	10
<b>Total</b>	<b>135</b>	<b>365</b>	<b>-</b>	<b>-</b>	<b>500</b>	<b>100</b>

Optional: 1 Wood and Metal

### Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FFS/N0119.Staining and polishing wooden furniture	30	70	-	-	100	25
FFS/N0120.Painting wooden furniture	30	70	-	-	100	25
FFS/N2101.Painting/ polishing metallic/ steel fabricated furniture	30	70	-	-	100	25
FFS/N2102.Powder coating metallic/ steel fabricated furniture	30	70	-	-	100	25
<b>Total</b>	<b>120</b>	<b>280</b>	<b>-</b>	<b>-</b>	<b>400</b>	<b>100</b>

## Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training

## Qualification Pack

### Glossary

<b>Sector</b>	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

## Qualification Pack

<b>Knowledge and Understanding (KU)</b>	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
<b>Organisational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.