

## **NSQF QUALIFICATION FILE**

### **BAMBOO WORKS**

#### **CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE**

Directorate General of Training (DGT)  
Government of India, Ministry of Skill Development and Entrepreneurship,  
1st and 2nd Floor, CIRTES Building  
Next to Pusa ITI, Pusa Campus  
New Delhi - 110012

#### **Name and address of submitting body:**

Directorate General of Training (DGT)  
Government of India, Ministry of Skill Development and Entrepreneurship,  
1st and 2nd Floor, CIRTES Building  
Next to Pusa ITI, Pusa Campus  
New Delhi - 110012

#### **Name and contact details of individual dealing with the submission**

Name: Shri Deepankar Mallick

Position in the organisation: Deputy Director General (C & P)

Address if different from above:

Tel number(s): 011-25847035

E-mail address: deepankar.mallick60@nic.in

#### **List of documents submitted in support of the Qualifications File**

1. Competency-based curriculum (Annexure 1)
2. Advertisements of different organisations for posts relevant to NTC in the trade

#### **Model Curriculum to be added which will include the following:**

- **Indicative list of tools/equipment to conduct the training:** Enclosed with curricula
- **Trainers qualification:** Indicated in the curriculum
- **Lesson Plan:** All NCVT curricula are designed indicating specific practical to be carried out during training along with details of trade theory. Based on this the concerned instructor prepares the Lesson Plan with support of Reference Books and IMPs developed by DGT.

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- **Distribution of training duration into theory/practical/OJT component:**  
Indicated in the curriculum.
- **SUMMARY**

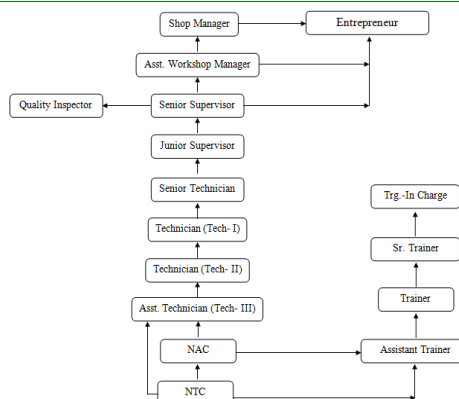
<b>1</b>	<b>Qualification Title</b>	"Bamboo Works"
<b>2</b>	<b>Qualification Code, if any</b>	DGT/1108
<b>3</b>	<b>NCO code and occupation</b>	7317.0800 – Mat Weaver, Bamboo 7317.0300 – Furniture Maker, Bamboo 7317.0700 – Basket Maker 7317.1100 – Chick Maker 7317.1200 – KhasThatti Maker
<b>4</b>	<b>Nature and purpose of the qualification (Please specify whether qualification is short term or long term)</b>	National Council for Vocational Training (NCVT) (long term qualification)
<b>5</b>	<b>Body/bodies which will award the qualification</b>	National Council for Vocational Training (NCVT) affiliates the ITIs as per DGT guidelines issued from time to time.
<b>6</b>	<b>Body which will accredit providers to offer courses leading to the qualification</b>	<b>National Council for Vocational Training (NCVT)</b> affiliates the ITIs
<b>7</b>	<b>Whether accreditation/affiliation norms are already in place or not , if applicable (if yes, attach a copy)</b>	Yes. The accreditation/ affiliation norms for all training providers are as per DGT guidelines issued from time to time with approval of NCVT.
<b>8</b>	<b>Occupation(s) to which the qualification gives access</b>	On successful completion of this course the candidates shall be gainfully employed as: 1. Mat Weaver, Bamboo 2. Furniture Maker, Bamboo 3. Basket Maker 4. Chick Maker 5. Khas Thatti Maker
<b>9</b>	<b>Job description of the occupation</b>	The person makes bamboo items such as mats, furniture, gifts, stationary items & jewellery etc. He makes mats of seasoned and coloured bamboo strips according to pattern or design. He makes bamboo furniture by sizing and dressing bamboo pieces, drilling holes, building frames and body with strengthening pieces; performs on various machineries used in Bamboo Technology; seasons the bamboos for making various bamboo products; creates & designs innovative gift/stationary items using AutoCad Software & free hand drawing.
<b>10</b>	<b>Licensing requirements</b>	N/A
<b>11</b>	<b>Statutory and Regulatory</b>	N/A

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	requirement of the relevant sector (documentary evidence to be provided)			
12	Level of the qualification in the NSQF	Level-3		
13	Anticipated volume of training/learning required to complete the qualification	<b>S. No.</b>	<b>Course Element</b>	<b>Notional Training Hours</b>
		1.	Professional Skill (Trade Practical)	1290
		2.	Professional Knowledge (Trade Theory)	258
		3.	Employability Skills	110
		5.	Library & Extracurricular activities	62
		6.	Project Work	160
		7.	Revision & Examination	200
			<b>Total</b>	<b>2080</b>
14	Indicative list of training tools required to deliver this qualification	As per Annexure enclosed in the curriculum		
15	Entry requirements and/or recommendations and minimum age	Passed 8th Class Examination under 10+2 system of education		
16	Progression from the qualification (Please show Professional and academic progression)	<ul style="list-style-type: none"> <li>• Can join Apprenticeship programs in different types of industries leading to a National Apprenticeship certificate (NAC).</li> <li>• Can join industries related to Bamboo works.</li> <li>• Can become an entrepreneur.</li> </ul>		

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**17 Arrangements for the Recognition of Prior learning (RPL)**

1. At present the students who have passed 10th class with minimum 3 years' experience in relevant field can appear for NCVT theory and practical semester examination directly.

2. The students who have passed SCVT examination in 'Bamboo Works' trade can also appear for the NCVT Examination in the relevant semester and Trade directly.

**18 International comparability where known (research evidence to be provided)**

1. Existence of any official document suggesting the comparability of the qualification with the qualifications in other countries is not known.

2. However, ITI passed out trainees are getting employment in many Gulf countries.

**19 Date of planned review of the qualification.** July 2023

**20 Formal structure of the qualification**

**Mandatory components**

Title of component and identification code/NOSs/Specific Learning outcomes	Estimated size (learning hours)	Level
<b>Semester – I</b>		
1. Comply with environment regulation and housekeeping and orientation	<b>40</b>	<b>3</b>
2. Identify bamboo items, safety tools & explain various Bamboo resource generation techniques.	<b>40</b>	<b>3</b>
3. Identify and operate various hand tools used in Bamboo Technology.	<b>80</b>	<b>3</b>

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4.	Identify, plan & apply preservatives, dyes, smoke treatment & chemical treatment process to preserve bamboo items.	40	3
5.	Operate various bamboo processing machineries and carry out their maintenance.	200	3
6.	Operate Glue Mixing machine & weaving machine for fixing different parts of bamboo products.	80	3
7.	Bend bamboo strips, Slivers & bamboo pole using blow lamp.	40	3
8.	Troubleshoot & perform maintenance procedure of different machines used in Bamboo works.	80	3
9.	Carry out different process of seasoning of bamboos & various propagation methods.	240	3
<b>Semester – II</b>			
10.	Identify & select appropriate bamboo species for different industrial Handicraft products.	80	3
11.	Design various gift items, stationery Item by free hand drawing.	40	3
12.	Identify different computer parts; boot & operate basic functions of computer.	40	3
13.	Install & utilize AutoCAD software to prepare different shapes and design of the products.	80	3
14.	Make various decorative products by designing innovative gift items, stationary items models/ prototype.	40	3
15.	Select & apply different process of bending & joints in different sections like furniture, handicraft & housing etc.	320	3
16.	Apply different techniques and process of making various kinds of bamboo furniture.	120	3
17.	Use Jigs & fixture to make uniform size & reduce production cost	40	3
18.	Identify finishing materials & apply different methods of finishing of bamboo products.	40	3
19.	Identify quality products as per market demand for production as per requirement and estimate the cost.	80	3
	<b>Revision, Project work and Examination</b>	<b>360</b>	<b>3</b>
	<b>Sub Total (A)</b>	<b>2080</b>	<b>3</b>

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<b>Optional components</b>			
	<b>Title of component and identification code/NOSs/ Learning outcomes</b>	<b>Estimated size (learning hours)</b>	<b>Level</b>
	<b>Sub Total (B)</b>		

<b>Total (A+B)</b>	<b>2080</b>	<b>3</b>
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### SECTION 1 ASSESSMENT

<b>21</b>	<b>Body/Bodies which will carry out assessment:</b> National Council for Vocational Training (NCVT)																				
<b>22</b>	<b>How will RPL assessment be managed and who will carry it out?</b> 1. At present the students who have passed 10th class with minimum 3 years' experience in relevant field can appear for NCVT theory and practical semester examination directly. 2. The students who have passed SCVT examination in 'Mechanic Diesel trade can also appear for the NCVT Examination in the relevant semester and Trade directly. State Directorates advertise in newspapers for informing the prospective candidates and NCVT will carry out the assessment.																				
<b>23</b>	<b>Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.</b>  <b>(1) Assessment process:</b> The assessment for the semester-based qualification is carried out by conducting formative assessments, and end-of-semester examinations. The internal assessments for theory subjects and practical are conducted by the concerned instructors for evaluating the knowledge and skill acquired by trainees and the behavioural transformation of the trainees. This internal assessment is primarily carried out by collecting evidence of competence gained by the trainees by evaluating them at work based on assessment criteria, asking questions and initiating formative discussions to assess understanding and by evaluating records and reports, and sessional marks are awarded to them. Theory and practical examinations are conducted in Trade theory and Employability Skills. The question papers for the theory Examinations contain objective type questions. Trade practical examinations are conducted by the respective State Governments. However, the question papers for the Trade practical are prepared by NCVT. The marking pattern and distribution of marks for the qualification are as under: <table border="1" data-bbox="312 1648 1399 2018"><thead><tr><th colspan="3">Marking Pattern</th></tr><tr><th>Sl. No.</th><th>Subject for the trade test</th><th>Maximum marks for the each subject</th></tr></thead><tbody><tr><td>a)</td><td>Practical</td><td>100</td></tr><tr><td>b)</td><td>Trade Theory</td><td rowspan="2">80 Objective type Written test of 80 marks (Trade Theory 30 marks &amp; Employability Skills 50 marks)</td></tr><tr><td>c)</td><td>Employability Skills</td></tr><tr><td>d)</td><td>Internal assessment</td><td>20</td></tr><tr><td colspan="2"><b>TOTAL:</b></td><td><b>200</b></td></tr></tbody></table>	Marking Pattern			Sl. No.	Subject for the trade test	Maximum marks for the each subject	a)	Practical	100	b)	Trade Theory	80 Objective type Written test of 80 marks (Trade Theory 30 marks & Employability Skills 50 marks)	c)	Employability Skills	d)	Internal assessment	20	<b>TOTAL:</b>		<b>200</b>
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c)	Employability Skills																				
d)	Internal assessment	20																			
<b>TOTAL:</b>		<b>200</b>																			

**(2) Minimum pass marks:**

40% for Theory Examination and 60% marks for Trade practical Examination.

**(3) Testing and certifications for the course:**

- OMR sheet based question paper.
- A panel of expert paper setters, who are graduates in the concerned field with minimum 5-7 years experience, is prepared for setting question papers for the Trade. The panel is vetted by the Member Secretary, NCVT.
- Paper setters are appointed from the panel after the approval of the competent authority for setting the question paper.
- The question papers are then moderated by the Board of Moderation to see if the paper is set as per the requirement and syllabus.
- The manuscripts of the moderated question papers are sent to Government Printing Presses for printing.
- Printed question papers, packed in sealed covers, are despatched to Banks/Police Stations for keeping in safe custody.
- The question papers are handed over to the Chairman/Principal of the Testing Centre two hours before the commencement of the Examination.
- An Examination Board consisting of representatives of industry/Employer/State Government are set up to supervise and monitor the conduct of Examinations at every Centre.
- Theory and practical Examinations are carried out with invigilators/examiners with the overall supervision of the Examination Board.
- Examiners called for evaluation of practical should have minimum technical qualification of a Diploma in the respective engineering field. However, when diploma holders not available, the qualification is suitably relaxed.
- Examiners for practical Examinations are appointed preferably from Polytechnics/Engineering colleges/Industry of repute. Government Departments or from amongst retired qualified personnel possessing requisite qualifications and sufficient experience in the trade/discipline.
- Each State Directorate prepares a panel of Examiners according to the norms as mentioned above and the Examiners are appointed from the panel.
- Flying squads from State Governments as well as the Central Government are constituted to check malpractices during the conduct of Examinations.
- OMR based answer sheets are evaluated by the third party evaluator only. Third party evaluator is selected for three years by open bidding process.
- Evaluation of every practical examination is carried out by the concerned examiner (from industry/ polytechnics) with the overall supervision of the Examination Board in a free and fair manner as per the assessment criteria.



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- Till 2014, the marks were compiled by the State Governments as per NCVT guidelines and the results were declared by the State Governments. At present, the marks are compiled by NCVT on its portal [www.ncvtmis.gov.in](http://www.ncvtmis.gov.in) and the results are declared by the State Governments.
- The successful trainees are awarded National Trade Certificates.

#### **Overall assessment strategy:**

Assessment of the qualification evaluates trainees to show that they can integrate knowledge, skills and values for carrying out relevant tasks as per the defined assessable outcomes and assessment criteria. The trainees may choose the preferred language for assessment. The underlying principle of assessment is fairness and transparency. While assessing the trainee, assessor is directed to assess as per the defined assessment criteria against the assessable outcomes. The evidence of the competence acquired by the trainees can be obtained by conducting theory and practical examinations, observing the trainees at work, asking questions and initiating formative discussions to assess understanding and evaluating records and reports. The ultimate objective of the assessment is to assess the candidates as per the defined assessment criteria for the assessable/ learning outcomes.

#### **Specific Arrangements for assessment:**

- Assessment is outcome-based.
- There are formative and summative assessments in Theory and Practical.
- Assessment is carried out in Trade theory, Trade Practical and Employability Skills.
- While Trade Theory and Trade Practical are used for assessing Trade-related jobs and Employability skills is used to test the communication, professional language, leadership, entrepreneurship and team-work abilities of the trainee.
- In addition to demonstration of theory and practical knowledge, trainees get a chance to present total personality.

#### **Quality assurance activities:**

- Question papers are set by external paper setters
- Evaluation of Theory Examinations is done by third-party agency. Third party evaluator is selected for three years by open bidding process.
- Trade Practical is examined by External Examiner (as explained above).

Please attach most relevant and recent documents giving further information about assessment and/or RPL.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

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#### ASSESSMENT EVIDENCE

Complete a grid for each component as listed in “Formal structure of the qualification” in the Summary.

*NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – i.e. Learning Outcomes to be assessed, assessment criteria and the means of assessment.*

#### 24. Assessment evidences

**Title of Component:** Bamboo Works

##### Means of assessment 1

Assessment will be evidence based comprising the following:

- Job carried out in labs/workshop
- Record book/ daily diary
- Answer sheet of assessment
- Viva-voce
- Progress chart
- Attendance and punctuality
- Assignment
- Project work

##### Means of assessment 2

Add boxes as required.

##### Pass/Fail

The minimum pass percentage is 40% for Theory Examination and 60% marks for Trade practical Examination.

## GENERIC LEARNING/ ASSESSABLE OUTCOME

LEARNING/ ASSESSABLE OUTCOME	ASSESSMENT CRITERIA
1. Apply safe working practices	1.1 Follow and maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements, and according to policy.
	1.2 Recognize and report all unsafe situations according to policy.
	1.3 Identify and take necessary precautions on fire and safety hazards and report according to work policy and procedures.
	1.4 Identify, handle and store/ dispose-off dangerous goods and substances according to policy and procedures following safety regulations and requirements.
	1.5 Identify and observe policies and procedures with regard to illness or accident.
	1.6 Identify safety alarms accurately.
	1.7 Report supervisor/ competent of authority in the event of

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	<p>accident or sickness of any staff and record accident details correctly according to accident/injury procedures.</p> <p>1.8 Identify and observe evacuation procedures according to site policy.</p> <p>1.9 Identify Personal Protective Equipment (PPE) and use the same as per related working environment.</p> <p>1.10 Identify basic first-aid and use them under different circumstances.</p> <p>1.11 Identify different fire extinguisher and use the same as per requirement.</p>
2. Comply with environment regulation and housekeeping	<p>2.1 Identify environmental pollution &amp; contribute to the avoidance of instances of environmental pollution.</p> <p>2.2 Deploy environmental protection legislation &amp; regulations.</p> <p>2.3 Take opportunities to use energy and materials in an environmentally friendly manner.</p> <p>2.4 Avoid waste and dispose waste as per procedure.</p>
3. Assist in exigencies and carry out elementary first-aid during emergencies.	<p>3.1 Demonstrate elementary first-aids.</p> <p>3.2 Demonstrate safety practices to be observed in kitchen.</p> <p>3.3 Demonstrate use of personal protective dresses.</p> <p>3.4 Identify emergency exit route.</p> <p>3.5 Demonstrate fire fighting procedure using fire extinguishers.</p>
4. Work in a team, understand and practice soft skills, technical English to communicate with required clarity.	<p>4.1 Obtain sources of information and recognize information.</p> <p>4.2 Use documents, regulations and occupationally related provisions.</p> <p>4.3 Conduct appropriate and target oriented discussions with higher authority and within the team.</p> <p>4.4 Present facts and circumstances, possible solutions &amp; use English and French terminology.</p> <p>4.5 Resolve disputes within the team.</p> <p>4.6 Conduct written communication.</p>
5. Explain energy conservation, global warming, pollution, and contribute in day-to-day work by using available resources optimally.	<p>5.1 Explain the concept of energy conservation, global warming, pollution and utilize the available resources optimally &amp; remain sensitive to avoid environment pollution.</p> <p>5.2 Explain standard procedure for disposal of waste.</p>
6. Explain personnel	6.1 Explain personnel finance and entrepreneurship.

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	6.2 Explain role of various schemes and institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non-financing support agencies to familiarize with the policies/ programmes, procedure & the available scheme.
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## SPECIFIC LEARNING/ ASSESSABLE OUTCOME

LEARNING/ ASSESSABLE OUTCOME	ASSESSMENT CRITERIA
<b>SEMESTER-I</b>	
7. Identify bamboo items, safety tools & explain various Bamboo resource generation techniques.	7.1 Demonstrate workshop safety & discipline.
	7.2 Use of tools safety and workshop safety.
	7.3 Identify different types of bamboo items.
	7.4 Demonstrate via field visit/ Harvesting Practice.
	7.5 Demonstrate modern utilization of bamboo items by showing visual aids.
8. Identify and operate various hand tools used in Bamboo Technology.	8.1 Identify various kinds of hand tools/machine tools used in bamboo works industry.
	8.2 Maintain the hand tools/machine tools and follow the safety /precautionary guidelines.
	8.3 Identify measuring tools & use conversion tables for measurement.
	8.4 Check for dimensional accuracy.
	8.5 Plan and select material and machine for drill holes to make observing safety points.
	8.6 Perform hand sawing/ drilling/ Skinning/ Filling process.
	8.7 Mark the job as per drawing.
	8.8 Demonstrate pattern making by using blow lamp and its precautions.
9. Identify, plan & apply preservatives, dyes, smoke treatment & chemical treatment process to preserve bamboo items.	9.1 Identify various preservatives/dyes used to preserve the bamboos/bamboo products
	9.2 Perform finishing of the surface of bamboo product as per requirement and arrange required items and tools.
	9.3 Select material and inspect visually for defects.
	9.4 Explain use of Borax/ Boric Acid in preservation.
	9.5 Demonstrate Smoke chamber /other Chemical Process of preservation.
	9.6 Perform Traditional processes of preservation.
	9.7 Dye the bamboo products utilizing various chemical/vegetative dyes.
10. Operate various bamboo processing	10.1 Plan and select the job and set up machine accessories at position to perform desired operation.

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machineries and carry out their maintenance.	10.2	Set the job and perform desired operation with proper adjustment of table, guide, fence and blade guard.
	10.3	Operate Cross Cutting machine & perform oiling/ lubrication including preventive maintenance of the machine.
	10.4	Operate Radial splitting Machine/ Automatic splitting Machine/ knot removing machine according to the marking following safety norms
	10.5	Troubleshoot & maintain the Radial splitting Machine/ Automatic splitting Machine/ knot removing machine
	10.6	Polish /oil /lubricate different machines like manual slivering machine/ round stick machine for proper functioning.
	10.7	Operate & maintain electric drill machine/ 2 side / 4 side machine planer.
	10.8	Perform desired operation and check the correctness as per drawing.
	10.9	Operate & troubleshoot Hydraulic Press Machine/ Resin Applicator machine.
11. Operate Glue Mixing machine & weaving machine for fixing different parts of bamboo products.	11.1	Operate & maintain the Glue Mixing machine / DD Saw machine
	11.2	Operate & maintain weaving Machine
	11.3	Avoid waste and plan for reuse/ dispose of the unused items.
12. Bend bamboo strips, Slivers & bamboo pole using blow lamp.	12.1	Study the drawing and make a plan for making desired pattern.
	12.2	Mark the work as per dimension of the drawing.
	12.3	Make pattern, using blow torch and explain its precautions.
	12.4	Bend bamboo strips/bamboo poles using blow lamp.
	12.5	Check for dimensional accuracy of the bamboo product
13. Troubleshoot & perform maintenance procedure of different machines used in Bamboo works.	13.1	Clean & maintain machine parts by oiling/greasing/lubricating.
	13.2	Identify basic faults and troubleshoot them
	13.3	Explain different procedures of maintenance of machines
14. Carry out different process of seasoning of	14.1	Explain Anatomical properties/ Chemical properties/ Physical/ Mechanical properties of bamboos
	14.2	Demonstrate various bamboo propagation methods.

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bamboos & various propagation methods.	14.3 Perform Air seasoning/ Kiln seasoning/ chemical seasoning
	14.4 Trace seasoning defects and take remedial action
	14.5 Explain Gross anatomy-Parechyma/ Vascular bundles/fibres.
<b>SEMESTER II</b>	
15. Identify & select appropriate bamboo species for different industrial handicraft products.	15.1 Identify bamboo species as per job requirement at practical field.
	15.2 Select appropriate bamboo species as per requirement of the bamboo product.
	15.3 Utilize various bamboo species for the formation of different bamboo handicrafts.
16. Design various gift items, stationery Item by free hand drawing.	16.1 Demonstrate free hand drawing & mark layout as per drawing.
	16.2 Draw various gift items/stationery Item.
	16.3 Plan required steps of operation to produce the gift/stationary item.
	16.4 Arrange required materials, tools and machineries for smooth performance of the operations.
17. Identify different computer parts; boot & operate basic functions of computer.	17.1 Boot the Computer/ Open Windows/ menus/use mouse.
	17.2 Create a directory in Windows.
	17.3 Create a File/ Folder
	17.4 Use my documents.
	17.5 Use start menu for opening an application.
	17.6 Change control panel settings for display
	17.7 Familiarize with Key Board and other computer components.
18. Install & utilize AutoCAD software to prepare different shapes and design of the products.	18.1 Install AutoCad Software.
	18.2 Identify various tools of Menu bar.
	18.3 Select & use various tools of Menu bar.
	18.4 Use AutoCAD pull down menu
	18.5 Apply User Coordinate System Icon
	18.6 Use Command Line / Command windows
19. Make various decorative products by designing innovative gift items, stationary items models/ prototype.	19.1 Design intervention on new innovative products.
	19.2 Make different gift items/stationery Item
	19.3 Make Bamboo Models / Prototype/ mock.
	19.4 Select Marketable Product.

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<p>20. Select &amp; apply different process of bending &amp; joints in different sections like furniture, handicraft &amp; housing etc</p>	<p>20.1 Choose exact type of joint to employ and arrange materials, tools and equipments to perform the operation.</p> <p>20.2 Construct tongue and groove/ male and female joint/ Bolt fastening joint/Overlapping joint/U-shape joint/ Horizontal joint/ Vertical joint etc.</p> <p>20.3 Assemble different parts and check for correctness, strength and finishing</p> <p>20.4 Make a design of Gift item and bamboo jewelleryes / ornaments</p> <p>20.5 Make Bamboo bags.</p> <p>20.6 Make tea coaster/ bamboo bags etc. in workshop with the help of machines and hand tools.</p> <p>20.7 Identify&amp; select various type of furniture as per requirement.</p> <p>20.8 Draw the Neat sketch of furniture</p> <p>20.9 Demonstrate different material used in furniture making</p> <p>20.10 Make Bamboo Mats and Blinds.</p> <p>20.11 Make Bamboo Mats / Bamboo Blinds by using Weaving Machine / manually.</p>
<p>21. Apply different techniques and process of making various kinds of bamboo furniture.</p>	<p>21.1 Apply appropriate Techniques for making furniture.</p> <p>21.2 Make Sofa set/Chair/ Table/Bed Beach &amp; Garden/Dining chair/Wall Chair/Swing/Relaxing Chair/Centre Table.</p> <p>21.3 Select raw material for bamboo houses.</p> <p>21.4 Make prototype houses.</p> <p>21.5 Preserve &amp; use bamboo for structural purposes - Code of practice.</p>
<p>22. Use Jigs &amp; fixture to make uniform size &amp; reduce production cost.</p>	<p>22.1 Identify &amp; select materials for making jigs &amp; fixtures</p> <p>22.2 Make various jig&amp; fixtures as per requirement</p> <p>22.3 Make different products using jigs &amp; fixtures.</p> <p>22.4 Make various moulds for making moulded Products.</p>
<p>23. Identify finishing materials &amp; apply different methods of finishing of bamboo products.</p>	<p>23.1 Identify &amp; select finishing tools/materials.</p> <p>23.2 Plan for finish the surface of bamboo product as per requirement and arrange required items and tools.</p> <p>23.3 Apply different techniques of finishing</p> <p>23.4 Final touch on the products using finishing materials.</p>

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24. Identify quality products as per market demand for production as per requirement and estimate the cost.	24.1 Collect sample according to Company sampling procedures.
	24.2 Measure samples for specified parameters according to company technical specifications.
	24.3 Estimate cost of production.



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**SECTION 2**  
**25. EVIDENCE OF LEVEL**

**OPTION A**

Title/Name of qualification/component: Bamboo Works		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	<p><b>Requires limited range of activities routine &amp; predictable.</b></p> <ul style="list-style-type: none"> <li>Identify bamboo items, safety tools &amp; explain various Bamboo resource generation techniques.</li> <li>Operate various bamboo processing machineries and carry out their maintenance.</li> <li>Bend bamboo strips, Slivers &amp; bamboo pole using blow lamp.</li> <li>Troubleshoot &amp; perform maintenance procedure of different machines used in Bamboo works.</li> <li>Carry out different process of seasoning of bamboos &amp; various propagation methods.</li> </ul>	<p>After the training, learner is expected to identify various bamboo items &amp; bamboo species, various hand tools &amp; machineries used in bamboo industry. The learner operates different machines like glue mixing machine, weaving machine, radial splitting machine etc.</p> <p>He/she is expected to bend bamboo strips, poles using blow lamp; preserve bamboo items by performing different methods of seasoning of bamboos; troubleshoots &amp; performs maintenance work like oiling, lubricating, polishing etc;</p> <p>The above tasks performed by the learner requires limited range of activities which are routine type in nature &amp; hence predictable.</p> <p>Thus the NSQF level 3is justified as per this descriptor.</p>	3

## NSQF QUALIFICATION FILE

### BAMBOO WORKS

Title/Name of qualification/component: Bamboo Works		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Professional knowledge	<p><b>Application of Basic facts, process &amp; principles in trade of employment</b></p> <ul style="list-style-type: none"> <li>Brief description of Hand tools and Machine tools. Specification of tools and types of tools</li> <li>Various techniques of Preservation and Treatment of Bamboo (Through ancient/traditional and modern methods) Colouring/Dying of Bamboo strips/ slivers.</li> <li>Brief description of polishing machine and how to operate, trouble shooting of the machine.</li> <li>Introduction of various - Anatomical structure, Chemical properties, Physical properties and Mechanical Properties</li> </ul>	<p>The learner is expected to know about different seasoning methods of bamboo products; various techniques of preservation &amp; treatment of bamboo including traditional methods. They have awareness of various hand tools and machine tools used on Bamboo technology, measuring tools. Conversion table etc. He/she is expected to know how to operate different machineries like polishing machine, Radial Splitting machine, Automatic Splitter Machine etc and methods of their maintenance.</p> <p>The above knowledge possessed by the learner are the basic facts, process and principles applied in this trade of employment.</p> <p>Hence NSQF Level 3 is justified for this Descriptor.</p>	3
Professional skill	<ul style="list-style-type: none"> <li>Design various gift items, stationery Item by free hand drawing.</li> <li>Install &amp; utilize AutoCAD software to prepare different shapes and design of the products.</li> <li>Make various decorative products by designing innovative gift items, stationary items models/ prototype.</li> <li>Apply different techniques and process of making various kinds of bamboo furniture.</li> </ul>	<p>The learner develops the skill of free hand drawing for making various gift items, stationary items; make decorative products &amp; applies different techniques to make various kinds of bamboo furniture. He/she is able to install &amp; use AutoCAD software to prepare different shapes &amp; design on computer. The person has the ability to bend bamboo strips, bamboo poles using blow lamp.</p> <p>To perform the above task the learner has to recall</p>	3

## NSQF QUALIFICATION FILE

### BAMBOO WORKS

Title/Name of qualification/component: Bamboo Works		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
		<p>&amp; demonstrate practical skills which are routine &amp; repetitive in narrow range of application.</p> <p>Hence NSQF Level 3 is justified for this descriptor.</p>	
Core skill	<p><b>Language to communicate written or oral, with required clarity</b></p> <ul style="list-style-type: none"> <li>Use documents and technical regulations and occupationally related provisions.</li> <li>Conduct written communication.</li> </ul> <p><b>Basic Mathematical Skills</b></p> <ul style="list-style-type: none"> <li>Demonstrate basic mathematical concept and principles to perform practical operations.</li> </ul> <p><b>Basic understanding of social political and natural environment</b></p> <ul style="list-style-type: none"> <li>Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resource.</li> </ul>	<p>The learner is able to communicate orally &amp; in written using simple English language, has active listening skills. Works as a team player and able to explain technical terms with minimum required clarity. The learner is able to perform basic mathematical calculations like addition, subtraction, multiplication etc. He/she is able to perform the job complying environment regulation and housekeeping by applying safe working practices. Maintains energy conservation, prevents global warming &amp; pollution by optimally using available resources in day to day work.</p> <p>Hence NSQF Level 3 is justified for this descriptor.</p>	3
Responsibility	<ul style="list-style-type: none"> <li>Identify &amp; select appropriate bamboo species for different industrial Handicraft products</li> <li>Identify finishing materials &amp; apply different methods of finishing of bamboo</li> </ul>	<p>The learner is expected to know the appropriate remedial action required for specific defect and thus is responsible for own work within defined limit. Thus the learner is responsible for own work &amp; learning to certain extent. Also demonstrates</p>	3

## NSQF QUALIFICATION FILE

### BAMBOO WORKS

Title/Name of qualification/component: Bamboo Works		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	<p>products.</p> <ul style="list-style-type: none"><li>• Identify different computer parts; boot &amp; operate basic functions of computer.</li><li>• Select &amp; apply different process of bending &amp; joints in different sections like furniture, handicraft &amp; housing etc.</li></ul>	<p>possible solutions and agree tasks within the team. The learner is able to recognize &amp; comply safe working practices under close supervision of the supervisor.</p> <p>Therefore NSQF Level 3 is justified for this descriptor.</p>	

**NSQF QUALIFICATION FILE**

**BAMBOO WORKS**

**OPTION B**

<b>Title/Name of qualification/component: Enter the title here</b>			<b>Level: Add level number</b>
<b>NSQF Domain</b>	<b>Key requirements of the job role</b>	<b>How the job role relates to the NSQF level descriptors</b>	<b>NSQF Level</b>
Process			
Professional knowledge			
Professional skill			
Core skill			
Responsibility			

**SECTION 3**

**EVIDENCE OF NEED**

<p><b>26</b></p>	<p><b>What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?</b></p> <table border="1"> <thead> <tr> <th data-bbox="339 472 632 629">Basis</th> <th data-bbox="632 472 879 629">In case of SSC</th> <th data-bbox="879 472 1393 629">In case of other Awarding Bodies (Institutes under Central Ministries and states departments)</th> </tr> </thead> <tbody> <tr> <td data-bbox="339 629 632 792">Need of the qualification</td> <td data-bbox="632 629 879 792"></td> <td data-bbox="879 629 1393 792">The proposed qualification is running in the system for last few decades and passed out candidates are engaged in various related industries.</td> </tr> <tr> <td data-bbox="339 792 632 1151">Industry Relevance</td> <td data-bbox="632 792 879 1151"></td> <td data-bbox="879 792 1393 1151">The job role defined for the qualification is as per the National Qualification of Occupation 2015 which is developed by Employment Directorate under the ministry of Labour and Employment in collaboration with different industry partners and as per ILO guidelines. This justifies the qualification is very much relevance for industry.</td> </tr> <tr> <td data-bbox="339 1151 632 1314">Usage of the qualification</td> <td data-bbox="632 1151 879 1314"></td> <td data-bbox="879 1151 1393 1314">The Proposed qualification is running in ITI system across the country successfully over the period of time.</td> </tr> <tr> <td data-bbox="339 1314 632 1375">Estimated uptake</td> <td data-bbox="632 1314 879 1375"></td> <td data-bbox="879 1314 1393 1375">The present seating capacity is 26.</td> </tr> </tbody> </table>	Basis	In case of SSC	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)	Need of the qualification		The proposed qualification is running in the system for last few decades and passed out candidates are engaged in various related industries.	Industry Relevance		The job role defined for the qualification is as per the National Qualification of Occupation 2015 which is developed by Employment Directorate under the ministry of Labour and Employment in collaboration with different industry partners and as per ILO guidelines. This justifies the qualification is very much relevance for industry.	Usage of the qualification		The Proposed qualification is running in ITI system across the country successfully over the period of time.	Estimated uptake		The present seating capacity is 26.
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Estimated uptake		The present seating capacity is 26.														
<p><b>27</b></p>	<p><b>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences.</b></p> <p>This qualification is run by Ministry of Skill Development and Entrepreneurship and different industries under the related line ministry are also generally consulted before finalizing the curricula.</p>															
<p><b>28</b></p>	<p><b>What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification</b></p> <p>The qualification is originally designed and approved by NCVT for the Craftsmen Training Scheme and is in existence for the last 60 years. NCVT has been entrusted with the responsibilities of prescribing standards and curricula for craftsmen training, advising the Government of India on the overall policy and programmes, conducting All India Trade</p>															

## NSQF QUALIFICATION FILE

### BAMBOO WORKS

	Tests and awarding National Trade Certificates.
29	<p><b>What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here.</b></p> <ul style="list-style-type: none"><li>• Mentor Council (MC) for the Handicrafts Sector was formed in 2014 to review the curriculum of this qualification under the sector.</li><li>• CSTARI, the research wing of DGT, reviews and updates the qualification, in consultation with industries and other stakeholders, on a regular basis by conducting trade committee meetings.</li><li>• DGT will keep on doing continuous comparative study in the trade by referring to relevant upcoming qualifications in the National Qualifications Register (NQR) and relevant sectors.</li></ul>

Please attach most relevant and recent documents giving further information about any of the topics above.

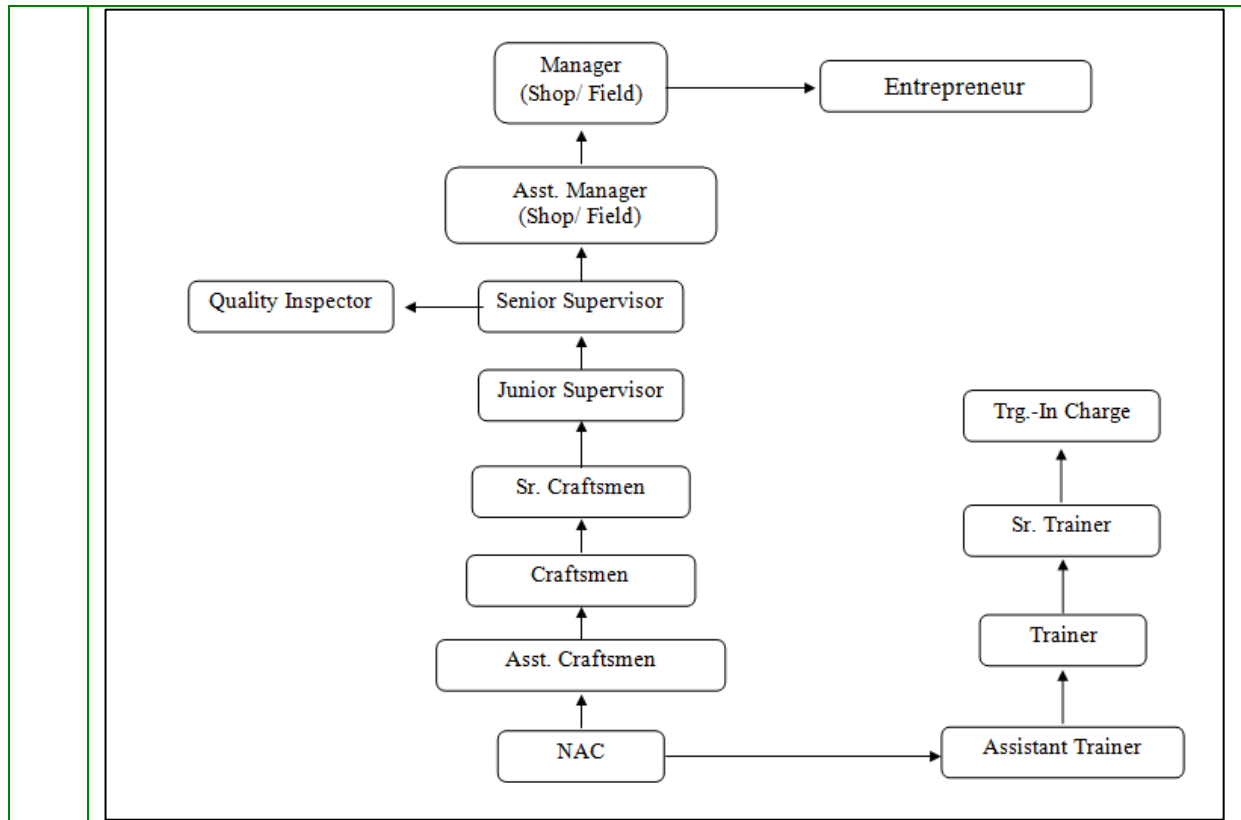
Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

#### **SECTION 4**

#### **EVIDENCE OF PROGRESSION**

30	<p><b>What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?</b> <b><i>Show the career map here to reflect the clear progression</i></b></p> <ul style="list-style-type: none"><li>• Qualifying trainee will obtain an NCVT Certificate in Bamboo Works trade which gives the following options of progression to the trainee:</li><li>• Entrepreneurship.</li></ul>
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**NSQF QUALIFICATION FILE**  
**BAMBOO WORKS**



Please attach most relevant and recent documents giving further information about any of the topics above.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.