

NSQF QUALIFICATION FILE**Approved in 24th NSQC Dated 27th Feb, 2020****NSDA Code****2020/CON/DGT/03680****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

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List of documents submitted in support of the Qualifications File

1. Competency-based curriculum with following details:

Model Curriculum to be added which will include the following:

- a. Indicative list of tools/equipment to conduct the training: Enclosed with curriculum
- b. Trainers qualification: Indicated in the curriculum
- c. Lesson Plan: All DGT 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 and demonstration plan with support of IMPs developed by NIMI, DGT.
- d. Distribution of training duration into theory/practical/OJT component: Indicated in the curriculum.

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2. Curriculum for Core Skills (Workshop Calculation & Science, Engineering Drawing and Employability Skills.)

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- SUMMARY

1	Qualification Title	'CARPENTER'
2	Qualification Code, if any	DGT/ 1022
3	NCO code and occupation	7115.0100 - Carpenter, General 7115.0200 - Carpenter, Construction
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	Prepare skilled Technicians to make, assemble, alter and repair wooden structures and articles according to sample or drawing using hand or power tools or both. It is long term qualification.
5	Body/bodies which will award the qualification	Directorate General of Training (DGT).
6	Body which will accredit providers to offer courses leading to the qualification	Directorate General of Training (DGT) accredits the Training providers (ITIs/ NSTIs/MSTIs/BTCs/BTPs / Industries / Establishments).
7	Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)	Yes. The accreditation/ affiliation norms and any amendments made from time to time are available on DGT web portal.
8	Occupation(s) to which the qualification gives access	<ul style="list-style-type: none"> 7115.0100 - Carpenter, General 7115.0200 - Carpenter, Construction
9	Job description of the occupation	Carpenter will be able to make, assemble, alter and repair wooden structures and articles according to sample or drawing using hand or power tools or both.
10	Licensing requirements	NOT REQUIRED
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)	NOT APPLICABLE
12	Level of the qualification in the NSQF	Level 4

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13	Anticipated volume of training/learning required to complete the qualification	Sl. No.	Course Element	Notional Training Hours
		1	Professional Skill (Trade Practical)	1000
		2	Professional Knowledge (Trade Theory)	280
		3	Workshop Calculation & Science	80
		4	Engineering Drawing	80
		5	Employability Skills	160
			Total	1600
14	Indicative list of training tools required to deliver this qualification	As per Annexure of curriculum.		
15	Entry requirements and/or recommendations and minimum age	Passed 8 th class examination Minimum age 14 years as on first day of academic session		
16	Progression from the qualification (Please show Professional and academic progression)	An Individual can proceed for:		
		Professional <ul style="list-style-type: none"> • Technician • Senior Technician • Supervisor • Manager • Entrepreneur 	Technical / Academic <div style="margin-left: 20px;"> <pre> graph TD A[Technical / Academic] --> B[ATS] A --> C[CITS] A --> D[Diploma/ Advance Diploma (Vocational)] </pre> </div>	
17	Arrangements for the Recognition of Prior learning (RPL)	<ul style="list-style-type: none"> • Yes (For more details refer "Guidelines for Private candidate" in DGT website MIS portal). 		
18	International comparability where known (research evidence to be provided)	-		
19	Date of planned review of the	5 Yrs. from the Date of Approval		

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	qualification.			
20	Formal structure of the qualification			
	Mandatory components			
	Title of component and identification code/NOSs/ Learning Outcomes	Estimated size (learning hours)		Level
		Skills	Knowledge	
TRADE SPECIFIC				
(i)	Identify timber/wood, apply measuring, marking and testing instrument and other holding and supporting hand Tools following safety precautions.	50	14	3
(ii)	Identify and apply various saws and portable power saw machines for Ripping, cross cutting, oblique sawing and curve cutting etc.	25	7	3
(iii)	Analyze the surface finish with exact sizing by planning, operation, identifying and applying various shaving tools or portable power planning machine.	25	7	3
(iv)	Identify and apply various paring tools, analyze and choose the positioning and employ holding device for chiselling with better finish.	25	7	4
(v)	Identify and classify various types of joints, analyze and prepare correct joint at correct position, related with strength and appearance.	100	28	4
(vi)	Make small wooden job as per drawing with schedule sizes of timber or alternatives of timber i.e. FRP, MDF, FOAM using various hardware.	125	35	4

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(vii)	Analyze and identify various carving tools and convert a wooden block/ piece into a decorative article.	25	7	4
(viii)	Demonstrate preservation of wooden item through surface finishing with various processes such as painting, polishing, varnishing etc.	50	14	4
(ix)	Demonstrate ripping, cross cutting, curve cutting etc. on band saw/ circular saw machine and grinding and setting of blade/ cutter.	75	21	4
(x)	Demonstrate different operations on Jointer/surface Planer/Thickness planer machine along with sharpening blades. (Range of operations – Surfacing, thickening, chamfering, edge bending etc.)	50	14	4
(xi)	Demonstrate working on pedestal grinding (Range of operations – grinding of mushroom head, cutting edge of tools, drills, etc.)	25	7	4
(xii)	Demonstrate working on pedestal /portable drilling machine, use of different types of drill bits, make holes of different sizes in correct location on woodwork.	25	7	4
(xiii)	Demonstrate different operations on wood turning lathe along with sharpening of cutting tools.	25	7	4
(xiv)	Demonstrate different operations on Tenon and mortise machine.	25	7	4
(xv)	Demonstrate different operations on Sanding machine.	25	7	4
(xvi)	Identify and prepare different types of pattern, core box, core print etc. for moulding application with proper allowances and colour codes.	75	21	4
(xvii)	Produce component involving different operations of fitting work and check for functionality.	25	7	4
(xviii)	Produce component involving different operations of sheet metal work and check for functionality.	50	14	4
(xix)	Prepare various roof truss, door and windows frame and shutters, assembling	100	28	4

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	& fixing (wooden/ aluminium or PVC).			
(xx)	Paint various door, windows frame, stair and furniture (wooden or aluminium).	25	7	4
(xxi)	Prepare various type of wooden floor, partition wall etc.	25	7	4
(xxii)	Check, identify, analyze and repair the wooden job	25	7	4
CORE SKILL				
EMPLOYABILITY SKILLS				
(i)	Apply safe working practices.	-	20	4
(ii)	Comply with environment regulation and housekeeping.	-	20	3
(iii)	Interpret & use formal and technical communication.	-	20	4
(iv)	Apply the concept in productivity & quality management in day to day work to improve productivity & quality.	-	20	4
(v)	List and interpret various acts of labour welfare legislation.	-	20	3
(vi)	Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources.	-	20	3
(vii)	Explain personnel finance, entrepreneurship and manage/organize related task in day to day work for personal & societal growth.	-	20	3
(viii)	Utilize basic computer applications and internet to take benefit of IT developments in the industry.	-	20	4
WORKSHOP CALCULATION & SCIENCE				
(i)	Demonstrate basic mathematical concept and principles to perform practical operations.	-	40	4
(ii)	Explain basic science in the field of study including simple machine.	-	40	4
ENGINEERING DRAWING				

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(i)	Read and apply engineering drawing for different application in the field of work.	-	80	4
	Total	1600		-

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21	<p>Body/Bodies which will carry out assessment: Controller of Examinations, DGT</p>
22	<p>DGT will carry out the RPL assessment following the below mentioned eligibility criteria for Trainee:</p> <p>Applicants aspiring to appear as Private Candidates in the AITT under CTS for award of NTC, have been categorized based on their educational background and experience. Subsequently 'Private Candidates' may be admitted under one of the following categories. Category wise 'eligibility criteria' for appearing as 'Private Candidate' in AITT under CTS has been listed below:</p> <p>Category I: Ex-trainees (successful pass-outs) of ITI</p> <p>A. Ex-trainees of ITI who already possess NTC in one of the trades under CTS, are eligible for applying as Private candidate for an allied trade, provided he/ she fulfils all the conditions regarding educational qualification etc. prescribed for that allied trade.</p> <p>B. In addition, the applicant should possess minimum of 1 year experience (as on date of submission of application) post the date of AITT result declaration in the desired allied trade in establishments implementing Apprenticeship Training Scheme (ATS)/ establishments registered under the Apprenticeship portal or registered MSMEs or Entities registered with any government/local authorities / shops covered under Factories Act 1948 and Shops and Establishments Act applicable for the concerned State.</p> <p>Category II: 'Ex-trainees (successful pass-outs) and current trainees under CoE scheme</p> <p>A. The applicant should have the minimum prescribed entry qualification and should fulfil eligibility criteria for the desired trade under CTS, in which he/she intends to appear for AITT as Private Candidate. CoE candidates must register as 'Private Candidate' under CTS in the relevant/mapped CTS trade only.</p> <p>B. There should be a minimum gap of 1 year between successful completions of CoE training i.e. from the date of result declaration to the date of submission of application for 'Private Candidate' certification.</p> <p>C. During this gap of 1 year, the candidate must have undergone Industry training or gained experience in desired trade in establishments implementing Apprenticeship Training Scheme (ATS)/ establishments registered under the Apprenticeship portal or registered MSMEs or Entities registered with any government/local authorities / shops covered under Factories Act 1948 and Shops and Establishments Act applicable for the concerned State.</p>

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	<p>Category III: SCVT Candidates (admitted till August 2018 session)</p> <p>A. No special provisions have been made for SCVT Trainees to enrol as 'Private Candidate'. Going forward, SCVT trainees have been granted equivalence vide G.S.R 186(E) dated 2nd March 2017 for undergoing apprenticeship training under the Apprentices Act 1961 to obtain 'NAC'.</p> <p>B. Only for SCVT trainees admitted till August 2018 batch, provision has been made for obtaining NTC by appearing in AITT under 'Private Candidate'. Such trainees will continue to be governed by old guidelines for 'Private Candidate'.</p> <p>Category IV: Other Candidates (candidate not falling in any of the above 3 categories, including SCVT trainees enrolled from admission session 2019 onwards)</p> <p>A. The applicant should have the minimum prescribed entry qualification and should fulfil eligibility criteria for the relevant trade under CTS, in which he/she desires to appear for AITT as Private Candidate.</p> <p>B. Applicant should be minimum 21 years of age on the date of submission of application. There is no upper age limit.</p> <p>C. The applicant should possess minimum of 3 years' experience (on the date of submission of application) in the relevant trade in establishments implementing Apprenticeship Training Scheme (ATS)/ establishments registered under the Apprenticeship portal or registered MSMEs or Entities registered with any government/local authorities / shops covered under Factories Act 1948 and Shops and Establishments Act applicable for the concerned State.</p> <p>For detail and updated information please refer to DGT web portal.</p>
23	<p>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.</p> <p>(1) Assessment process:</p> <p>The assessment for the qualification is carried out by conducting formative assessments, and end of year examinations (Summative). The formative assessments in respect of each Learning Outcome for practical and related theory are conducted by the concerned instructors for evaluating the knowledge and skill acquired by trainees and the behavioural transformation of the trainees. This formative 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. Summative assessment is carried out by All</p>

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India Trade Test on Trade Theory, Trade practical, Workshop Calculation & Science, Engineering Drawing and Employability Skills. The question papers for the theory Examinations contain objective type questions.

The marking pattern and distribution of marks for the qualification are as under:

Sl. No.	Type of assessment	Subject for the trade test	Marks
1	Summative Assessment	Practical	250
2		Trade Theory	100
3		Employability Skills	50
4		Workshop Calculation and Science.	50
5		Engineering Drawing	50
6	Formative assessment based on Learning Outcomes		200
TOTAL:			700

(2) Minimum pass marks:

The minimum pass percent for Trade Practical and Formative assessment is 60% & for all other subjects is 33%. There will be no Grace marks.

Testing and certifications for the course:

Controller of examinations, DGT carries out the assessment and issues National Trade Certificate (NTC) following the norms and guidelines issued by the Directorate from time to time.

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

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the defined learning 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 learning 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 discussions to assess, understand and evaluate records and reports. The ultimate objective of the assessment is to assess the candidates as per the defined assessment criteria for the 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, Workshop

Calculation and Science, Engineering Drawing and Employability Skills.

- While Trade Theory and Trade Practical are used for assessing Trade-related jobs, Workshop Calculation and Science is used to test trainee's numerical and logical skills, Drawing is used to test the ability of the trainee to draw and read sketches 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/ software generated.

Evaluation of Theory Examinations in Trade, Workshop Calculation & Science, Engineering Drawing and Employability Skill is done by third-party agency.

Trade Practical is examined by External Examiner.

24. Assessment evidences**Title of Component: Formative Assessment Breakup**

(on half yearly average of the learning assessment covered)

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Assessment will be evidence based comprising the following for each Learning Outcome:

Serial No.	Terminal Competency	Maximum Weightage (%)
1	Safety consciousness	15
2	Workplace hygiene	5
3	Attendance/ Punctuality	10
4	Ability to follow Manuals/ Written instructions	5
5	Application of Knowledge	10
6	Skills to handle tools / equipment/ Instruments/ Devices	10
7	Economical use of materials	5
8	Working Strategy	10
9	Quality in workmanship/ Performance	15
10	VIVA	15
	Total Maximum Weightage (%)	100

Pass/Fail

The minimum pass percentage is 60% marks for formative assessment.

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LEARNING OUTCOME WITH ASSESSMENT CRITERIA:

LEARNING OUTCOME (TRADE SPECIFIC)	
LEARNING OUTCOME	ASSESSMENT CRITERIA
1. Identify timber/ wood & apply measuring, marking and testing instrument and holding & supporting hand Tools following safety precautions.	Demonstrate workshop safety & discipline.
	Identify different types of wood/ timber.
	Identify the measuring, marking, work holding and testing instrument.
	Mark as per drawing and measure dimensions for checking.
	Demonstrate use of testing instrument and other useable hand tools.
2. Identify and apply various saws and portable power saw machines for Ripping, cross cutting, Oblique sawing and curve cutting etc.	Select material and inspect visually for defects.
	Mark the job as per drawing and check measurements before sawing.
	Mark an angle with the aid of bevel square and mitre square for oblique sawing.
	Identify and arrange the required tools for desired operations and make the job.
	Perform Ripping/ cross, cutting/ curve, sawing/ cutting operations according to the marking following safety norms.
	Check for dimensional accuracy.
	Avoid waste and plan for reuse/ dispose of the unused items.
3. Analyze the surface finish with exact sizing by planning operation identify and apply various shaving tools or portable power planning machine.	Select material and appropriate planner for required surface finish and size.
	Set planner with sharpened cutting iron and perform required planning operation to obtain required size and finish.
	Plane across the grain and end grain.
	Check the size, flatness, squareness and finish of the job as per drawing.
	Demonstrate removal, sharpening and fitting of planner blade observing standard operating procedures.
4. Identify and apply various paring tools and analyze and choose the positioning	Arrange woods with vertical/ horizontal grains and required type of chisel for performing operation (chiselling across the grain)as per drawing.

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and employ holding device for chiselling with better finish.	Mark the work as per dimension of the drawing.
	Perform chiselling as per drawing and ensure better finish.
	Check the finished job as per drawing.
5. Identify and classify various types of joints, analyze and prepare correct joint at correct position, related with strength and appearance.	Choose exact type of joint to employ and arrange materials, tools and equipments to perform the operation.
	Perform framing joint (Sawing and chiselling) as required maintaining dimensions.
	Assemble different parts and check for correctness, strength and finishing.
6. Make small wooden job as per drawing with schedule sizes of timber or alternatives of timber i.e. FRP, MDF, FOAM using various hardware.	Arrange required material, tools etc. to make the job as per drawing.
	Mark as per drawing.
	Perform sawing, chiselling of different parts, prepare all the parts as per marking layout and check dimension.
	Assemble different parts to make a complete job.
	Overall finish and check dimensions as per drawing.
	Avoid waste and plan for reuse/ dispose of the unused materials.
7. Analyze and identify various carving tools and convert a wooden block/ piece into a decorative article.	Plan for wood carving as per drawing and arrange for material and tools for the purpose.
	Mark layout as per drawing.
	Perform wood carving operation to make a piece of wood as per drawing.
	Check for corrections as per drawing.
	Finish the product by smoothing.
8. Demonstrate preservation of wooden item through surface finishing with various processes such as painting, polishing, varnishing etc.	Plan for finish the surface of wooden product as per requirement and arrange required items and tools.
	Clean/ prepare surface for the purpose.
	Smoothen surface applying proper procedure.
	Apply varnish/ polish on the surface to get required finish.
	Check the quality of finish.
9. Demonstrate ripping, cross cutting, curve	Plan and select the job and set up machine accessories at position to perform desired operation.

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	<p>Check the saw or blade and cutter guard.</p> <p>Set the job and perform desired operation with proper adjustment of table, guide, fence and blade guard.</p> <p>Check the product shape, size and dimensions with the drawing.</p> <p>Sharpen cutter or saw teeth and set teeth of saw.</p>
10. Demonstrate different operations on Jointer/ surface Planer/ Thickness planer machine along with sharpening blades. (Range of operations – Surfacing, thickening, chamfering, edge bending etc.)	<p>Plan and set the job and machine for surfacing and thickening operation.</p> <p>Adjust the table, fence and blade guard as per the width and thickness of the job.</p> <p>Perform desired operation and check the correctness as per drawing.</p>
11. Demonstrate working on pedestal grinding (Range of operations – grinding of mushroom head, cutting edge of tools, drills, etc.)	<p>Plan for offhand grinding with required safety norms.</p> <p>Perform grinding operation to make required shape, size and dimension.</p> <p>Check the work for its dimensional accuracy and cutting efficiency.</p>
12. Demonstrate working on pedestal/potable drilling machine, use of different types of drill bits; make holes of different sizes in correct location on wood work.	<p>Plan and select material and machine for drill holes to make observing safety points.</p> <p>Mark the job as per drawing.</p> <p>Set the job and cutting tool properly.</p> <p>Perform operation to make drill holes as per drawing.</p> <p>Check dimensions for correctness.</p>
13. Demonstrate different operations on wood turning lathe along with	<p>Plan and set the machine for desired turning operation.</p> <p>Hold the job between centres or in other work holding devices.</p>

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sharpening of cutting tools.	Hold the tool and adjust tool rest
	Perform required turning operation observing standard operating procedure.
	Check dimensions and finish as per drawing.
14. Demonstrate different operations on Tenon and mortise machine.	Plan and set the Mortise machine for mortising operation and check sharpness of the tool.
	Mark the mortise on the job, select and set the chisel on the machine.
	Hold the job and adjust the table as per the depth and bench of mortise.
	Make the mortise to the required size and check the job for correctness.
	Plan and set the Tenoning machine for tenoning operation.
	Mark the tenon on the job for tenon cutting.
	Set the job on the tenoning machine and cut the hunched portion.
	Check the job for correctness.
15. Demonstrate different operations on Sanding machine.	Plan to perform and set the sanding machine for sanding operation.
	Perform sanding operation.
	Check the job for correctness.
16. Identify and prepare different types of pattern, core box, core print etc. for moulding application with proper allowances and colour codes.	Study the drawing and make a plan for making desired pattern.
	Select proper material and tool for making the pattern.
	Prepare layout for the pattern.
	Make the material as per layout considering contraction scale, drafting and machining allowances and check the

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	dimensions.
	Perform removing material and make the pattern as per drawing.
	Check for accuracy of the pattern.
17. Produce component involving different operations of fitting work and check for functionality.	Study the drawing/ sketch and plan for the required steps of operation to produce the item.
	Arrange required materials, tools and machineries for smooth performance of the operations.
	Mark the job as per drawing.
	Perform required operation to prepare the job as per drawing.
	Check the dimensions of the product and its functionality.
18. Produce component involving different operations of sheet metal work and check for functionality.	Study the drawing/ sketch and plan for the required steps of operation to produce the item.
	Arrange required materials, tools and machineries for smooth performance of the operations.
	Develop and mark metal sheet to make the desired component as per drawing.
	Perform required operations to prepare the job as per drawing.
	Check the dimensions of the product and its functionality.
19. Prepare various roof truss, door and windows frame and shutters, assembling & fixing (wooden/ aluminium or PVC).	Study the drawing/ sketch and plan for the required steps of operation to produce the item.
	Arrange required materials, tools and machineries for smooth performance of the operations.
	Mark the job and perform required operation to prepare the item as per drawing.

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	Assemble the components to make a complete item.
	Check the dimensions of the product and its functionality.
20. Paint various door, windows frame, stair and furniture (wooden or aluminium).	Plan and arrange materials and tools for painting wooden surface.
	Remove old paint and/ or clean, smoothen and prepare the surface to be painted.
	Prepare correct solution of primer/ paint.
	Apply primer/ paint on the surface with correct procedure.
	Check finishing of the work.
21. Prepare various type of wooden floor, partition wall etc.	Study the drawing/ sketch and plan for the required steps of operation to produce the item.
	Arrange required materials, tools and machineries for smooth performance of the operations.
	Mark the job and perform required operation to prepare the item as per drawing.
	Assemble the components to make a complete item.
	Check the dimensions of the product and its functionality.
22. Check, identify, analyze and repair the wooden job.	Check the wooden/ Aluminium/PVC or like item and identify the repair/ reconditioning work to be done.
	Plan for the repair/ reconditioning work and arrange required materials, tools and machineries for smooth performance of the work.
	Perform the repair/ reconditioning work.
	Check the item for its workability/ acceptability.

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LEARNING OUTCOME (CORE SKILL)	
LEARNING OUTCOME	ASSESSMENT CRITERIA
EMPLOYABILITY SKILLS	
1. Apply safe working practices	Follow and maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements and according to site policy.
	Recognize and report all unsafe situations according to site policy.
	Identify and take necessary precautions on fire and safety hazards and report according to site policy and procedures.
	Identify, handle and store / dispose of dangerous goods and substances according to site policy and procedures following safety regulations and requirements.
	Identify and observe site policies and procedures in regard to illness or accident.
	Identify safety alarms accurately.
	Report supervisor/ Competent of authority in the event of accident or sickness of any staff and record accident details correctly according to site accident/injury procedures.
	Identify and observe site evacuation procedures according to site policy.
	Identify Personal Protective Equipment (PPE) and use the same as per related working environment.
	Identify basic first aid and use them under different circumstances.
	Identify different fire extinguisher and use the same as per requirement.
	2. Comply with environment regulation and housekeeping
Deploy environmental protection legislation & regulations	
Take opportunities to use energy and materials in an environmentally friendly manner.	
Avoid waste and dispose waste as per procedure	
Recognize different components of 5S and apply the same in the working environment.	
3. Interpret & use formal and technical communication.	Obtain sources of information and recognize information.
	Use and draw up technical drawings and documents.
	Use documents and technical regulations and occupationally

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	related provisions.
	Conduct appropriate and target oriented discussions with higher authority and within the team.
	Present facts and circumstances, possible solutions & use English special terminology.
	Resolve disputes within the team.
	Conduct written communication.
4. Apply the concept in productivity & quality management in day to day work to improve productivity & quality.	Explain the concept of productivity and apply during execution of job.
	Explain the concept of quality tools and apply during execution of job.
5. List and interpret various acts of labour welfare legislation.	Explain basic concept of labour welfare legislation, adhere to responsibilities and remain sensitive towards such laws.
	Knows benefits guaranteed under various acts.
6. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources.	Explain the concept of energy conservation, global warming, pollution and utilize the available resources optimally & remain sensitive to avoid environment pollution.
	Explain standard procedure for disposal of waste.
7. Explain personnel finance, entrepreneurship and manage/organize related task in day to day work for personal & societal growth.	Explain personnel finance and entrepreneurship.
	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.
	Prepare a report to become an entrepreneur for submission to financial institutions.
8. Utilize basic computer applications and internet to take benefit of IT developments in the industry.	Explain the basic hardware of personal computer.
	Use common application software viz., word, excel, power point etc., in day to day work.
	Awareness about useful internet websites, search relevant information pertaining to the assigned tasks.

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WORKSHOP CALCULATION & SCIENCE	
1. Demonstrate basic mathematical concept and principles to perform practical operations.	Solve different problems like phase angle, etc. with the help of a calculator.
	Demonstrate conversion of Fraction to Decimal and vice versa.
	Explain BCD code, conversion from decimal to binary and vice-versa, all other conversions.
2. Explain basic science in the field of study including simple machine.	Explain concept of basic science related to the field such as Material science, Mass, weight, density, speed, velocity, heat & temperature, force, motion, pressure, heat treatment, centre of gravity, friction.
	Explain levers and its types.
	Explain relationship between Efficiency, velocity ratio and Mechanical Advantage.
	Prepare list of appropriate materials by interpreting detail drawings and determine quantities of such materials.
	Solve simple problems on lifting tackles like crane-Solution of problems with the aid of vectors.
ENGINEERING DRAWING	
1. Read and apply engineering drawing for different application in the field of work.	Read & interpret the information on drawings and apply in executing practical work.
	Read & analyse the specification to ascertain the material requirement, tools and assembly/maintenance parameters.
	Encounter drawings with missing/unspecified key information and make own calculations to fill in missing dimension/parameters to carry out the work.

NSQF QUALIFICATION FILE

Approved in 24th NSQC Dated 27th Feb, 2020

SECTION 2

25. EVIDENCE OF LEVEL

OPTION A

Title/Name of qualification/component: Carpenter		Level: 4	
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
Process	<p>Familiar, Predictable, Routine Situations of Clear Choice</p> <ul style="list-style-type: none">• Identify and apply various paring tools, analyze and choose the positioning and employ holding device for chiselling with better finish.• Demonstrate ripping, cross cutting, curve cutting etc. on band saw/ circular saw machine and grinding and setting of blade/ cutter.• Identify and classify various types of joints, analyze and prepare correct joint at correct position, related with strength and appearance.• Demonstrate different operations on planning machine along with sharpening blades. (Range of operations – Surfacing, thickening, chamfering, edge bending etc.)• Demonstrate working on pedestal grinding	<p>In the learning outcomes for example 'Identify and classify various types of joints, analyze and prepare correct joint at correct position, related with strength and appearance' and 'Demonstrate ripping, cross cutting, curve cutting etc. on band saw/ circular saw machine and grinding and setting of blade/ cutter', the learner will be required to choose appropriate tools, equipments, Procedures as per the requirement of the job. The work will however be done within a familiar, predictable and routine range of situations to achieve the tolerance levels and accuracy demanded as per the job.</p> <p>Thus, the learner requires to demonstrate ability to work in familiar, predictable, routine, situation of clear choice.</p> <p>Hence the NSQF level as per this descriptor will</p>	4

NSQF QUALIFICATION FILE

Approved in 24th NSQC Dated 27th Feb, 2020

Title/Name of qualification/component: Carpenter			Level: 4
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
	<p>(Range of operations – grinding of mushroom head, cutting edge of tools, drills, etc.)</p> <ul style="list-style-type: none"> Demonstrate different operations on Tenon and mortise machine. 	be 4.	
Professional knowledge	<p>Factual Knowledge of field of Knowledge or study</p> <ul style="list-style-type: none"> Occupational Safety & Health: Health, Safety and Environment guidelines, legislations & regulations as applicable. Identification, specifications, uses and maintenance of commonly used hand tools. Common Indian timbers Defects in timber, diseases of timber, knots, shakes, grains etc. Characteristics of wood, physical and mechanical properties of wood. Application of plywood, block board, laminated board, hard board, insulation board, mica etc. Application of portable disc sander. Care & maintenance of disc sander. 	<p>The learner demonstrates factual knowledge of field of Occupational Safety & Health: Health, Safety and Environment guidelines, legislations & regulations as applicable. The learner also demonstrates knowledge of Quality control as required while selecting timber as per given job's requirement. The learner understands and is able to demonstrate knowledge of Characteristics of wood, physical and mechanical properties of wood, application of plywood, block board, laminated board, hard board, insulation board, mica etc. Also the learner demonstrates knowledge of Conventional and Contemporary methods of Wood Cutting and Planning and finishing/Polishing of Furniture.</p> <p>Hence NSQF Level is 4 for this descriptor.</p>	4
Professional	<ul style="list-style-type: none"> Demonstrate ripping, cross cutting, curve 	The learner after the trainer will be able to work	4

NSQF QUALIFICATION FILE

Approved in 24th NSQC Dated 27th Feb, 2020

Title/Name of qualification/component: Carpenter		Level: 4	
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
skill	<p>cutting etc. on band saw/ circular saw machine and grinding and setting of blade/ cutter.</p> <ul style="list-style-type: none"> • Make small wooden job as per drawing with schedule sizes of timber or alternatives of timber i.e. FRP, MDF, FOAM using various hardware. • Demonstrate preservation of wooden item through surface finishing with various processes such as painting, polishing, varnishing etc. • Check, identify, analyze and repair the wooden job. • Demonstrate different operations on wood turning lathe along with sharpening of cutting tools. • Demonstrate different operations on Tenon and mortise machine. • Demonstrate different operations on Sanding machine. • Paint various door, windows frame, stair and furniture (wooden or aluminium). 	<p>independently and recall and demonstrate practical skill, routine and repetitive in narrow range of application for the learning outcomes such as ‘Demonstrate ripping, cross cutting, curve cutting etc. on band saw/ circular saw machine and grinding and setting of blade/ cutter’ etc.</p> <p>The learning outcomes like “Make small wooden job as per drawing with schedule sizes of timber or alternatives of timber i.e. FRP, MDF, FOAM using various hardware”, “Demonstrate preservation of wooden item through surface finishing with various processes such as painting, polishing, varnishing etc”, all of which involve making independent decisions using appropriate rule and tools. The learning outcomes like ” Check, identify, analyze and repair the wooden job” requires the learner to perform the tasks assigned as per quality standards using quality concepts.</p> <p>Hence NSQF Level is 4 for this descriptor.</p>	

NSQF QUALIFICATION FILE

Approved in 24th NSQC Dated 27th Feb, 2020

Title/Name of qualification/component: Carpenter		Level: 4	
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
Core skill	<p>Language to communicate written or oral, with required clarity</p> <ul style="list-style-type: none"> Interpret & use formal and technical communication. <p>Basic Mathematical Skills</p> <ul style="list-style-type: none"> Demonstrate basic mathematical concept and principles to perform practical operations. <p>Basic understanding of social political and natural environment</p> <ul style="list-style-type: none"> Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources. Comply with environment regulation and housekeeping. 	<p>The work of Carpenter involves Preparation of Wooden Jobs as per the provided Drawing which requires competence in written language with required clarity in order to understand the work enlisted as per the job. The learner will also need to communicate with team supervisor to understand the job and explain ones work which requires competence in oral language, with required clarity.</p> <p>The learner will also need to have basic understanding of social political and natural environment as mentioned in the learning outcome for example ‘Comply environment regulation and housekeeping’.</p> <p>Hence NSQF Level is 4 for this descriptor.</p>	4
Responsibility	<ul style="list-style-type: none"> Analyze the surface finish with exact sizing by planning, operation, identifying and applying various shaving tools or portable power planning machine. Make small wooden job as per drawing with schedule sizes of timber or alternatives of timber i.e. FRP, MDF, FOAM using various hardware. 	<p>The role of Carpenter is independently responsible to perform the work as per specifications and their own analysis of what needs to be done based on their understanding of Wood, its properties, its concepts of selection, cutting and joining processes, principles and standards as evident in learning outcomes like “Analyze the surface finish with exact sizing by</p>	4

NSQF QUALIFICATION FILE

Approved in 24th NSQC Dated 27th Feb, 2020

Title/Name of qualification/component: Carpenter		Level: 4	
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF level descriptors	NSQF Level
	<ul style="list-style-type: none">Analyze and identify various carving tools and convert a wooden block/ piece into a decorative article.Demonstrate working on pedestal grinding (Range of operations – grinding of mushroom head, cutting edge of tools, drills, etc.)Prepare various roof truss, door and windows frame and shutters, assembling & fixing (wooden/ aluminium or PVC).Check, identify, analyze and repair the wooden job.	<p>planning, operation, identifying and applying various shaving tools or portable power planning machine”, “Prepare various roof truss, door and windows frame and shutters, assembling & fixing (wooden/ aluminium or PVC)”, “Check, identify, analyze and repair the wooden job” etc.</p> <p>Hence NSQF Level is 4 for this descriptor.</p>	

SECTION 3

EVIDENCE OF NEED

26	<p>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?</p> <table border="1" data-bbox="338 526 1390 1675"> <thead> <tr> <th data-bbox="338 526 625 672">Basis</th> <th data-bbox="625 526 1390 672">In case of other Awarding Bodies (Institutes under Central Ministries and states departments)</th> </tr> </thead> <tbody> <tr> <td data-bbox="338 672 625 1052">Need of the qualification</td> <td data-bbox="625 672 1390 1052"> <p>Construction Sector has a significant presence of organized as well as unorganized skilled manpower requirement. This sector is poised to grow exponentially in the years to come and is highly labour intensive and there are many emerging trends in this sector. Hence the qualification has been designed keeping in view to cater to the ever-increasing demand of skilled manpower in consultation with stakeholders.</p> </td> </tr> <tr> <td data-bbox="338 1052 625 1473">Industry Relevance</td> <td data-bbox="625 1052 1390 1473"> <p>The job role defined for the qualification is as per the National Classification of Occupations 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. Moreover, the training is imparted in ITIs/NSTIs/MSTIs/BTC/ BTPs/ Industries / Establishments etc. where such requirement is available. This justifies the qualification is very much relevant for industry.</p> </td> </tr> <tr> <td data-bbox="338 1473 625 1601">Usage of the qualification</td> <td data-bbox="625 1473 1390 1601"> <p>The Proposed qualification will create skilled Technician for various establishments in different Sectors.</p> </td> </tr> <tr> <td data-bbox="338 1601 625 1675">Estimated uptake</td> <td data-bbox="625 1601 1390 1675"> <p>The present seating capacity is 15704.</p> </td> </tr> </tbody> </table>	Basis	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)	Need of the qualification	<p>Construction Sector has a significant presence of organized as well as unorganized skilled manpower requirement. This sector is poised to grow exponentially in the years to come and is highly labour intensive and there are many emerging trends in this sector. Hence the qualification has been designed keeping in view to cater to the ever-increasing demand of skilled manpower in consultation with stakeholders.</p>	Industry Relevance	<p>The job role defined for the qualification is as per the National Classification of Occupations 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. Moreover, the training is imparted in ITIs/NSTIs/MSTIs/BTC/ BTPs/ Industries / Establishments etc. where such requirement is available. This justifies the qualification is very much relevant for industry.</p>	Usage of the qualification	<p>The Proposed qualification will create skilled Technician for various establishments in different Sectors.</p>	Estimated uptake	<p>The present seating capacity is 15704.</p>
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Usage of the qualification	<p>The Proposed qualification will create skilled Technician for various establishments in different Sectors.</p>										
Estimated uptake	<p>The present seating capacity is 15704.</p>										
27	<p>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences.</p> <p>The qualification, originally designed for Craftsman Training Scheme is in existence for many years and approved by DGT (Regulatory Body) under Ministry of Skill Development and Entrepreneurship, Govt. of India.</p>										

<p>28</p>	<p>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</p> <p>The qualification is originally designed and approved by DGT for the Craftsman Training Scheme and is in existence for many years. No such duplicate qualification of same duration and competencies exists.</p>
<p>29</p>	<p>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</p> <ul style="list-style-type: none"> • The research wing of CSTARI & DGT reviews and updates the qualification, in consultation with industries and other stakeholders, on a regular basis by conducting trade committee meetings. • DGT will monitor any duplicity by comparing existing qualifications with upcoming ones in the National Qualifications Register (NQR) and relevant sectors.

SECTION 4

EVIDENCE OF PROGRESSION

30 **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? Show the career map here to reflect the clear progression**

On completion of the training the trainee will have an opportunity to move in vertical/horizontal pathways to promote to higher designations. The learner can further undergo other specialised courses to excel in the relevant field.

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    graph LR
      A[Technician] --> B[Senior Technician]
      B --> C[Supervisor]
      C --> D[Manager]
      B --> E[Entrepreneur]
  
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The diagram illustrates a career progression path. It starts with a box labeled 'Technician'. A double-headed arrow points to a box labeled 'Senior Technician'. From 'Senior Technician', a double-headed arrow points to a box labeled 'Supervisor', which in turn has a double-headed arrow pointing to a box labeled 'Manager'. Below the 'Senior Technician' box, a vertical line descends to a horizontal line that spans the width of the top four boxes. From the center of this horizontal line, a vertical line descends to a box labeled 'Entrepreneur'.