Model Curriculum

QP Name:	**Assistant Shuttering Carpenter**
QP Code:	**ICE/CON/Q0302**
Version:	**3.0**
NSQF Level:	**3**
Model Curriculum Version:	**3.0**

The Institution of Civil Engineers Society (ICES)
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Training Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure Construction
Occupation	Shuttering Carpentry
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7115.0201
Minimum Educational Qualification and Experience	Grade 10 Pass OR Grade 8 pass with 2-year of (NTC/ NAC) after 8th OR 9th grade pass with 1-year relevant experience OR 8th grade pass with 2-year relevant experience OR 5th grade pass with 5-year relevant experience OR Previous relevant Qualification of NSQF Level 2 with 3-year relevant experience OR Previous relevant qualification of NSQF Level 2.5 with 1.5 relevant experience
Pre-Requisite License or Training	Not Applicable
Minimum Job Entry Age	As per Govt. Norms
Last Reviewed On	31-08-2023
Next Review Date	31-08-2026
NSQC Approval Date (Original)	31-08-2023
Adoption Date	07-10-2025
Adoption Valid Till	31-08-2026
QP Version	4.0
Model Curriculum Creation Date	31-08-2023
Model Curriculum Valid Up to Date	31-08-2026
Model Curriculum Version	4.0
Minimum Duration of the Course	360 Hours
Maximum Duration of the Course	360 Hours

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills to:

- Describe the process of using the relevant tools and equipment for shuttering carpentry.
- Describe the process of assisting in making wooden shutters boards and joints.
- Describe the process of assisting in assembling and dismantling conventional and system formwork for RCC structures.
- Elucidate ways to erect and dismantle temporary scaffold up to 3.6-meter height
- Explain the importance of working effectively in a team to deliver desired results at the workplace.
- Elucidate ways to work according to personal health, safety and environment protocols at construction sites.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
CON/N0312: Use the relevant tools and equipment for shuttering carpentry NOS Version- 4.0 NSQF Level- 3.0	**15:00**	**15:00**	**30:00**	**00:00**	**60:00**
Module 1: Introduction to the role of a Assistant Shuttering Carpenter	05:00	00:00	00:00	00:00	05:00
Module 2: Process of using the relevant tools and equipment for shuttering carpentry	10:00	15:00	30:00	00:00	55:00
CON/N0313: Assist in making wooden shutters, boards and joints NOS Version- 4.0 NSQF Level- 3	**35:00**	**25:00**	**00:00**	**00:00**	**60:00**
Module 3: Process of assisting in making wooden shutters, boards and joints	35:00	25:00	00:00	00:00	60:00
CON/N0314: Assist in assembling and dismantling conventional and system formwork for RCC structures NOS Version- 4.0 NSQF Level- 3	**45:00**	**45:00**	**00:00**	**00:00**	**90:00**
Module 5: Process of assisting in assembling and dismantling conventional and system formwork for RCC structures	45:00	45:00	00:00	00:00	90:00

CON/N0101: Erect and dismantle temporary scaffold up to 3.6 - meter height NOS Version- 7.0 NSQF Level- 3	**15:00**	**45:00**	**00:00**	**00:00**	**60:00**
Module 6: Process of erecting and dismantling temporary scaffold up to 3.6-meter height	15:00	45:00	00:00	00:00	60:00
CON/N8001: Work effectively in a team to deliver desired results at the workplace NOS Version- 12.0 NSQF Level- 4	**05:00**	**25:00**	**00:00**	**00:00**	**30:00**
Module 7: Work effectively in a team to deliver desired results at the workplace	05:00	25:00	00:00	00:00	30:00
CON/N9001: Work according to personal health, safety and environment protocols at construction site NOS Version- 10.0 NSQF Level- 4	**05:00**	**25:00**	**00:00**	**00:00**	**30:00**
Module 8: Follow safety norms as defined by organization, adopt healthy and safe work practices	05:00	25:00	00:00	00:00	30:00
DGT/VSQ/N0101: Employability Skills (30 Hours) NOS Version- 1.0 NSQF Level- 2	**30:00**	**00:00**	**00:00**	**00:00**	**30:00**
Module 9: Employability Skills	30:00	00:00	00:00	00:00	30:00
Total Duration	**150:00**	**180:00**	**30:00**	**00:00**	**360:00**

Module Details

Module 1: Introduction to the role of an Assistant Shuttering Carpenter

Mapped to CON/N0312, v 4.0

Terminal Outcomes:

- Discuss the job role of an Assistant Shuttering Carpenter.

Duration: **05:00**	**Duration**: **00:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the size and scope of the Construction industry and its sub- sectors. • Discuss the role and responsibilities of an Assistant Shuttering Carpenter. • Identify various employment opportunities for an Assistant Shuttering Carpenter.	
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 2: Process of using the relevant tools and equipment for shuttering carpentry

Mapped to CON/N0312, v 4.0

Terminal Outcomes:

- Describe the process of using tools, equipment, components and materials.

Duration: 10:00	**Duration: 15:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the use of relevant manual and power tools and equipment, such as claw hammer, hand saw, hack saw wooden planners, measuring tape, nailing hammer, try square, plumb bob and other relevant tools. • Describe the safe working methods and movements while performing relevant tasks. • Explain the types and use of slings, shackles and lifting belts. • Describe the process of stacking various shuttering carpentry and scaffolding materials. • State the safe height for stacking shuttering carpentry and scaffolding materials. • List different types of hand and power tools used for cutting and planning of timber. • State the relevant components and their standard sizes. • Describe the safe procedures for manual and mechanical material handling. • Describe the standard housekeeping procedure. • Explain how to work safely at heights.	• Demonstrate how to use the appropriate hand and power tools, such as claw hammer, hand saw, hack saw wooden planners, measuring tape, nailing hammer, try square, plumb bob, drilling machine, power saw, etc. • Show how to use materials such as timbers, plywood, runner pieces of different sizes, wooden battens for shuttering work. • Demonstrate the process of setting up and using bamboos and ballis, props, a crow span, H-beam, shuttering sheets, foot plates, U head and other relevant components for shuttering works. • Demonstrate the process of carrying out regular maintenance of tools and equipment, e.g. cleaning, oiling, minor repairs. • Demonstrate the use of personal protective gears, such as safety shoes, gloves, helmets, ear plugs, safety goggles and half body safety harness.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Claw Hammer, Ball Pin Hammer, Handsaw, Tenon Saw, Wooden Jack Planner, Iron Jack Planner, Wooden Marking Gauge, Wooden Mortise Gauge, Auger, Farmer Chisel, Mortise Chisel, Cutting Player, Screw Driver, Star Screw Driver, Marking Knife / Scribe, Wooden Mallet, Oil Stone (Rough / Smooth), Cutting Chisel, Center Punch, Bench Vice, Hacksaw Frame With Blade, Triangle File, Drill Bit, Ring Spanner, Double End Spanner, Flat File, Half Round File, Hand Held	

Circular Saw, Hand Held Zig Saw, Hand Drill Machine, Table Mounted Saw, Planing Machine, Power Drilling Machine, Masking Tape, Nylon Line Thread, Nails, Spirit Level, Steel Measuring Tape, Plumb Bob, Water Level Tube, Hammer, Spanner (Set), Wrench, Pulley, Rope, Nuts and Bolts, Mason's Line, Tri- Square, Safety Shoes, Safety Goggles, Safety Helmet, Cotton Hand – Gloves, Tools Bag, Safety Belt, Face Mask, Operator – Leather Apron, Ear Muff, Reflective Jackets, Safety Message Boards, Fire Extinguishers, Sand Buckets.

Module 3: Process of assisting in making wooden shutters, boards and joints

Mapped to CON/N0313, v 4.0

Terminal Outcomes:

- Elucidate ways to cut, plane and drill timber and plywood equipment and make timber joints.

Duration: 35:00	**Duration**: 25:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the safety regulations concerning handling and storing shuttering and scaffolding tools, materials and components. • Explain the importance of personal protection and the use of relevant safety gear and equipment for cutting and sizing operations. • Describe various safe working methods for working with scaffolds. • Explain the use of power tools, such as handheld circular saw, handheld zig saw, hand drill machine, table mounted saw, wood planer, power drilling machine, etc. • State the visual checks to be performed to determine the quality of timber and plywood. • Explain the types of wood, such as hard wood and soft wood and their common defects. • Explain the types and thickness of plywood such as commercial, waterproof, marine plywood, etc. • Explain the use of different hand and power tools for cutting and planing timber. • Elucidate the handling, repair and maintenance requirements of relevant tools. • Explain the use of measurement and marking tools. • List different types of timber joints. • Explain the use of different types of files. • List different types of cutting blade, size and cutting depth. • State the appropriate electrical safety measures for the use of power tools. • Explain how to make lines, sketch and label.	• Show how to use circular saw blade for cutting wood based on the thickness and type of wood. • Show how to measure and mark timber/ plywood using appropriate measurement and marking tools. • Demonstrate how to use handheld power saw for cutting and sizing timber and plywood. • Show how to cut timber and plywood of different types and thickness using table mounted saw, safely feeding timber/ plywood to the machine. • Demonstrate how to drill holes of different diameters in timber and plywood using power drilling machine, as instructed by the supervisor. • Demonstrate how to create timber joints such as lap joint, mortis and tenon joints, dovetail joints and housing joints using appropriate hand tools. • Demonstrate ways to assist in making shutter boards as per instructions.

Classroom Aids
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop
Tools, Equipment and Other Requirements
Claw Hammer, Ball Pin Hammer, Handsaw, Tenon Saw, Wooden Jack Planner, Iron Jack Planner, Wooden Marking Gauge, Wooden Mortise Gauge, Auger, Farmer Chisel, Mortise Chisel, Cutting Player, Screw Driver, Star Screw Driver, Marking Knife / Scribe, Wooden Mallet, Oil Stone (Rough / Smooth), Cutting Chisel, Center Punch, Bench Vice, Hacksaw Frame With Blade, Triangle File, Drill Bit, Ring Spanner, Double End Spanner, Flat File, Half Round File, Hand Held Circular Saw, Hand Held Zig Saw, Hand Drill Machine, Table Mounted Saw, Planing Machine, Power Drilling Machine, Masking Tape, Nylon Line Thread, Nails, Spirit Level, Steel Measuring Tape, Plumb Bob, Water Level Tube, Hammer, Spanner (Set), Wrench, Pulley, Rope, Nuts and Bolts, Mason's Line, Tri- Square, Safety Shoes, Safety Goggles, Safety Helmet, Cotton Hand – Gloves, Tools Bag, Safety Belt, Face Mask, Operator – Leather Apron, Ear Muff, Reflective Jackets, Safety Message Boards, Fire Extinguishers, Sand Buckets.

Module 4: Process of assisting in assembling and dismantling conventional and system formwork for RCC structures

Mapped to CON/N0314, v 4.0

Terminal Outcomes:

- Describe the process of performing the preparatory activities.
- Elucidate ways to assemble and dismantle conventional formwork and system formwork.

Duration: 45:00	**Duration: 45:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• State the units of measurements. • Explain the use of relevant measurements and marking tools. • Explain the use of relevant hand tools for shuttering work. • State the standard size of relevant hand tools and components. • Explain the use of water level tube, spirit level, plumb bob and tri- square. • Elucidate how to provide support in shuttering works. • Explain different types of tying ropes. • Explain the use of materials, components and equipment for conventional and system formwork. • Explain the use of different types of hand and power tools for cutting and planing timber. • Describe the standard procedure for assembling and dismantling conventional and system formwork. • Describe the standard health and safety procedure.	• Demonstrate how to shift and stack the required quantity of materials and components at the work site as per the instructions. • Demonstrate ways to assist in marking, cutting and sizing timber for making shutter boards. • Demonstrate the process of carrying out nailing to make shutter boards as per instructions. • Demonstrate ways to assist in erecting staging for shuttering using conventional formwork. • Show how to tie different types of knots for shuttering as instructed and work requirements. • Demonstrate ways to assist in assembling and fixing aluminum and steel formwork as per instructions. • Demonstrate the process of assisting in erecting staging for shuttering using system formwork. • Demonstrate the process of assisting in removing shutter boards and dismantling system formwork safely under supervision.
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Claw Hammer, Ball Pin Hammer, Handsaw, Tenon Saw, Wooden Jack Planner, Iron Jack Planner, Wooden Marking Gauge, Wooden Mortise Gauge, Auger, Farmer Chisel, Mortise Chisel, Cutting Player, Screw Driver, Star Screw Driver, Marking Knife / Scribe, Wooden Mallet, Oil Stone (Rough / Smooth), Cutting Chisel, Center Punch, Bench Vice, Hacksaw Frame With Blade, Triangle File, Drill Bit, Ring Spanner, Double End Spanner, Flat File, Half Round File, Hand Held Circular Saw, Hand Held Zig Saw, Hand Drill Machine, Table Mounted Saw, Planing Machine, Power Drilling Machine, Masking Tape, Nylon Line Thread, Nails, Spirit Level, Steel Measuring Tape, Plumb Bob, Water Level Tube, Hammer, Spanner (Set), Wrench, Pulley, Rope, Nuts and Bolts, Mason's Line, Tri- Square, Safety Shoes, Safety Goggles, Safety Helmet, Cotton Hand – Gloves, Tools Bag, Safety Belt, Face Mask, Operator – Leather Apron, Ear Muff, Reflective Jackets, Safety Message Boards, Fire Extinguishers, Sand Buckets.	

Module 5: Process of erecting and dismantling temporary scaffold up to 3.6- meter height

Mapped to CON/N0101, v 7.0

Terminal Outcomes:

- Explain the process of erecting and dismantling temporary scaffold.

Duration: 15:00	Duration: 45:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the use of different types of scaffolds (e.g. cup-lock, frame scaffold). • Explain the use of tools and tackles in scaffolding, including tools for erecting and dismantling 3.6 meter temporary scaffold. • Elucidate the identification and use of different scaffolding components. • List the standard size of scaffolding components. • Describe the standard procedure for erecting and dismantling 3.6 m temporary scaffold.	• Demonstrate the process of carrying out levelling in the area where scaffold needs to be erected and check for ground compactness. • Demonstrate how to use appropriate components and follow the standard procedure for erecting temporary scaffold up to 3.6 m in height. • Demonstrate the process of setting up walk-boards, guard rails, toe- boards and other components on the scaffold's working platform. • Show how to clean and stack all components properly after dismantling.
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Claw Hammer, Ball Pin Hammer, Handsaw, Tenon Saw, Wooden Jack Planner, Iron Jack Planner, Wooden Marking Gauge, Wooden Mortise Gauge, Auger, Farmer Chisel, Mortise Chisel, Cutting Player, Screw Driver, Star Screw Driver, Marking Knife / Scribe, Wooden Mallet, Oil Stone (Rough / Smooth), Cutting Chisel, Center Punch, Bench Vice, Hacksaw Frame With Blade, Triangle File, Drill Bit, Ring Spanner, Double End Spanner, Flat File, Half Round File, Hand Held Circular Saw, Hand Held Zig Saw, Hand Drill Machine, Table Mounted Saw, Planing Machine, Power Drilling Machine, Masking Tape, Nylon Line Thread, Nails, Spirit Level, Steel Measuring Tape, Plumb Bob, Water Level Tube, Hammer, Spanner (Set), Wrench, Pulley, Rope, Nuts and Bolts, Mason's Line, Tri- Square, Safety Shoes, Safety Goggles, Safety Helmet, Cotton Hand – Gloves, Tools Bag, Safety Belt, Face Mask, Operator – Leather Apron, Ear Muff, Reflective Jackets, Safety Message Boards, Fire Extinguishers, Sand Buckets.	

Module 6: Work effectively in a team to deliver desired results at the workplace

Mapped to CON/N8001, v 12.0

Terminal Outcomes:

- Explain the importance of interacting and communicating in an effective manner.
- Elucidate ways to support co-workers to execute the project requirements.
- Elucidate ways to practice inclusion at workplace.

Duration: 05:00	Duration: 25:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Elucidate own roles and responsibilities. • Explain the importance of effective communication. • Elucidate the consequences of poor teamwork on project outcomes, timelines, safety at the construction site, etc. • Explain different modes of communication used at workplace. • Explain the importance of creating healthy and cooperative work environment among the gangs of workers. • Elucidate applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement. • Explain the importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timeliness, safety, risks at the construction project site. • Explain the importance and need of supporting co-workers facing problems for the smooth functioning of work. • Discuss the fundamental concept of gender equality. • Explain how to recognize and be sensitive to issues of disability, culture and gender. • Discuss legislation, policies and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation.	• Demonstrate how to pass on work related information/ requirement clearly to the team members. • Show how to report any unresolved problem to the supervisor immediately. • Demonstrate ways to hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams. • Demonstrate ways to work together with co-workers in a synchronized manner. • Demonstrate effective implementation of gender-neutral practices at workplace. • Demonstrate ways to address discriminatory and offensive behaviour in a professional manner as per organizational policy.
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 7: Work according to personal health, safety and environment protocols at construction site

Mapped to NOS CON/N9001, v 10.0

Terminal Outcomes:

- Explain the importance of following safety norms as defined by organization.
- Explain the need to adopt healthy & safe work practices.
- Describe the process of implementing good housekeeping and environment protection process and activities.
- Explain the importance of following infection control guidelines as per applicability.

Duration: 05:00	Duration: 25:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the reporting procedures in cases of breaches or hazards for site safety, accidents and emergency situations as per guidelines. • Explain different types of safety hazards at construction sites. • Discuss basic ergonomic principles as per applicability. • Describe the procedure for responding to accidents and other emergencies at site. • Explain the importance of handling tools, equipment and materials as per applicable norms. • Explain the effect of construction material on health and environments as per applicability. • Describe various environmental protection methods as per applicability. • Explain the storage requirement of waste including non-combustible scrap material and debris, combustible scrap material and debris, general construction waste and trash (non-toxic, non- hazardous), any other hazardous waste and any other flammable wastes at the appropriate location. • Explain how to use hazardous material in a safe and appropriate manner as per applicability. • Explain types of fire. • Describe the procedure of operating different types of fire extinguishers. • State safety relevant to tools, tackles and equipment as per applicability. • List housekeeping activities relevant to task. • Elucidate ways of transmission of	• Demonstrate how to follow emergency and evacuation procedures in case of accidents, fires or natural calamities. • Show how to operate different types of fire extinguishers corresponding to various types of fires as per EHS guidelines. • Demonstrate the use of appropriate Personal Protective Equipment (PPE) as per work requirements for Head Protection, Ear Protection, Fall Protection, Foot Protection, Face and Eye Protection, Hand and Body Protection and Respiratory Protection (if required). • Demonstrate how to check and install all safety equipment as per standard guidelines. • Show how to collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature. • Show how to clean and disinfect all materials, tools and supplies before and after use.

infection ● Elucidate ways to manage infectious risks at the workplace. ● Describe different methods of cleaning, disinfection, sterilization and sanitization. ● List the symptoms of infection like fever, cough, redness, swelling and inflammation.	
Classroom Aids:	
Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids	
Tools, Equipment and Other Requirements	
Leather Hand Gloves, Jump suit, Wire brush, Hand and Leg guard leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags, Safety Notice board	

Module 8: Employability Skills

Mapped to NOS DGT/VSQ/N0101, v 1.0

Duration: 30:00
Key Learning Outcomes
Introduction to Employability Skills Duration: 1 Hour After completing this programme, participants will be able to: 1. Discuss the importance of Employability Skills in meeting the job requirements **Constitutional values - Citizenship Duration: 1 Hour** 2. Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. 3. Show how to practice different environmentally sustainable practices **Becoming a Professional in the 21st Century Duration: 1 Hours** 4. Discuss 21st century skills. 5. Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations. **Basic English Skills Duration: 2 Hours** 6. Use appropriate basic English sentences/phrases while speaking **Communication Skills Duration: 4 Hour** 7. Demonstrate how to communicate in a well -mannered way with others. 8. Demonstrate working with others in a team **Diversity & Inclusion Duration: 1 Hour** 9. Show how to conduct oneself appropriately with all genders and PwD 10. Discuss the significance of reporting sexual harassment issues in time **Financial and Legal Literacy Duration: 4 Hours** 11. Discuss the significance of using financial products and services safely and securely. 12. Explain the importance of managing expenses, income and savings. 13. Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws **Essential Digital Skills Duration: 3 Hours** 14. Show how to operate digital devices and use the associated applications and features, safely and securely 15. Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely **Entrepreneurship Duration: 7 Hours** 16. Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges **Customer Service Duration: 4 Hours** 17. Differentiate between types of customers 18. Explain the significance of identifying customer needs and addressing them 19. Discuss the significance of maintaining hygiene and dressing appropriately **Getting ready for apprenticeship & Jobs Duration: 2 Hours** 20. Create a biodata 21. Use various sources to search and apply for jobs 22. Discuss the significance of dressing up neatly and maintaining hygiene for an interview 23. Discuss how to search and register for apprenticeship opportunities

On-the-Job Training

Mapped to Assistant Shuttering Carpenter

Mandatory Duration: 30:00	Recommended Duration: 00:00
Location: On-Site	
Terminal Outcomes ● Explain the types and use of slings, shackles and lifting belts. ● Use the appropriate hand and power tools, such as claw hammer, hand saw, hack saw wooden planners, measuring tape, nailing hammer, try square, plumb bob, drilling machine, power saw, etc. ● Set up and use bamboos and ballis, props, acrow span, H-beam, shuttering sheets, foot plates, U head and other relevant components for shuttering works. ● Measure and mark timber/ plywood using appropriate measurement and marking tools. ● Use handheld power saw for cutting and sizing timber and plywood. ● Carry out nailing to make shutter boards as per instructions. ● Assist in erecting staging for shuttering using system formwork. ● Create timber joint such as lap joint, mortis and tenon joints, dovetail joints and housing joints using appropriate hand tools. ● Carry out levelling in the area where scaffold needs to be erected and check for ground compactness. ● Operate different types of fire extinguishers corresponding to various types of fires as per EHS guidelines.	

Annexure

Trainer Requirements

Minimum Educational Qualification	Specialization	Relevant Industry Experience		Preferable Training Experience		Remarks
		Years	*Specialization*	*Years*	*Specialization*	
Graduation	Civil Engineering	1	Site Execution (Civil Work)	1	Site Execution (Civil Work)	
OR						
Diploma	Civil Engineering	2	Site Execution (Civil Work)	1	Site Execution (Civil Work)	
OR						
ITI	Relevant Trade	4	Site Execution (Civil Work)	1	Site Execution (Civil Work)	

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role "Assistant Shuttering Carpenter", mapped to QP: "ICE/CON/Q0302, v3.0", Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: "Trainer (Vet and Skills)", mapped to the Qualification Pack: "MEP/Q2601, v2.0". The minimum accepted score as per MEPSC guidelines is 80%.

Assessor Requirements

Minimum Educational Qualification	Specialization	Relevant Industry Experience		Preferable Training / Assessment Experience		Remarks
		Years	*Specialization*	*Years*	*Specialization*	
Graduation	Civil Engineering	1	Site Execution (Civil Work)	1	Site Execution (Civil Work)	
OR						
Diploma	Civil Engineering	2	Site Execution (Civil Work)	1	Site Execution (Civil Work)	
OR						
ITI	Relevant Trade	4	Site Execution (Civil Work)	1	Site Execution (Civil Work)	

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role "Assistant Shuttering Carpenter", mapped to QP: "ICE/CON/Q0302 v3.0", Minimum accepted score is 80%	Recommended that the Assessor is certified for the Job Role: "Assessor (VET and skills)", mapped to the Qualification Pack: "MEP/Q2701, v2.0". The minimum accepted score is 80%.

Assessment Strategy

This section includes the processes involved in identifying, gathering and interpreting information to evaluate the Candidate on the required competencies of the program.

1. **Assessment System Overview:**

Assessment is done through ICES affiliated Assessment Agencies. Assessors are trained & certified by ICES after Training of Assessor (ToA) program. Assessments are conducted to gauge and assess the trainee's skill and knowledge competency in the specified areas.

The assessment will have both theory, practical and viva components as per ratio specified in each NOS for **Assistant Shuttering Carpenter** job role.

During the practical task, trainees are assessed on their workmanship, quality of finished product and time management. They will be graded for all their assessments based on the approved assessment strategy which is signed off by ICES. The Assessor submits an assessment plan to ICES prior to assessments.

The assessment plan contains the following information:

- What will be assessed, i.e. the competency based on each NOS based on theory, practical and viva questions
- How assessment will occur i.e. methods of assessment
- When the assessment will occur
- Duration of assessment
- Where the assessment will take place i.e. context of the assessment (workplace/simulation)
- The criteria for decision making i.e. those aspects that will guide judgments
- Where appropriate, any supplementary criteria are used to make a judgment on the level of performance.

ICES will be monitoring thoroughly the complete Assessment process.

2. **Testing Environment:**

- Training partner shares the batch start date and end date, number of trainees and the job role.
- Assessment will be fixed for a day after the end date of training. It could be next day or later. Assessment will be conducted at the training venue/test center only.
- The knowledge/theory assessments are conducted with proper seating arrangements with enough space between the candidates to prevent mal practicing.
- Question set for Theory and Practical will be distributed to each candidate by the Assessor.
    - Theory testing will include MCQ type questions, pictorial questions etc. which will test the trainee on his theoretical knowledge of the subject.
    - Practical assessments will be conducted in the approved test centers. The training provider will ensure adequate tools and materials are available to conduct the practical test.
    - Viva Testing will be conducted during or post to the practical assessment by the assessor concerned. This Viva Assessment is applicable to understand the outcomes from OJT attended by the concerned candidate.
- One (1) Assessor is eligible to conduct assessments of a batch of maximum 30 candidates.
- The assessment must comprise of two components, namely:
    - Knowledge assessment (Theory assessment)
    - Skill assessment (Practical / Hands-on Skill assessment)

3. **Mode of assessment**

- Demonstration/Practical Performance /Skill Assessment
- Synoptic multiple-choice question test for Theory Assessment

4. **Performance/skill assessment:**
    - The performance/skill assessment will be conducted through demonstration/practical
    - For the practical test trainees are assessed through a given task, which they have to complete correctly for them to be marked as passed.
    - The assessment is conducted in a simulated working environment. Due to this fact, the assessors must note that the naturally occurring evidence of competence is unavailable or infrequent. Simulation must be undertaken in a Realistic Working Environment which provides an environment that replicates the key characteristics of the workplace in which the skill to be assessed is normally employed.
5. **Knowledge Assessment:**
    - The knowledge assessments are conducted through Theory (written) Test and Viva Test
    - Synoptic test is used for this. It is an MCQ (Multiple Choice Question) test which is prepared externally and externally marked, meaning by agency having no link with training partners.
    - The Viva test will be conducted by the assessor in the oral mode considering the communication and domain understanding of skills of trainees.
    - The assessment strategy, weightage and duration of assessment for **Assistant Shuttering Carpenter** is summarized below

Assessment Type	Formative or Summative	Strategies	Weightage	Duration (hours)
Knowledge	Summative	MCQ	30	2 hours
Skill	Summative	Structured practical Task	70	6 hours

6. **Assessment Quality Assurance levels/Framework**
    - ICES has developed assessment criteria framework for each Qualification pack as per National Occupational Standards. The criteria framework includes weightages/marks for each criterion under knowledge and skill. The criteria ensure quality assurance as they ensure valid, consistent and fair assessments at all locations. Issued to the affiliated Assessment body. The Assessment Body develops questions based on ICES's approved assessment criteria.
    - The training partner will intimate the time of arrival of the assessor and time of leaving the venue. Random spot checks/audit may be conducted by ICES to monitor assessment.
    - Continuous Monitoring through virtual and In-person mode are conducted to ensure the assessment is conducted as per stipulated process
    - Process and Technical audit of assessment batches by quality team are conducted to avoid errors in assessment process
    - A well -defined comprehensive framework of NON-COMPLIANCE MATRIX is defined and implemented to identify the non-compliance made by assessor and AA and punitive actions are taken correspondingly.
    - The capacity building sessions are conducted regularly for assessors and assessment agencies to update them about best practices in assessment
7. **Types of evidence or evidence-gathering protocol:**
    - Evidence in the form of answer sheets in case of knowledge assessments (Theory only) is collected.
    - For Practical and Viva assessments videos and photographs are prepared as evidence. These are submitted by the assessor to the assessment agency. ICES does random checks of the same with the participant/ trainee's ID and ascertains authenticity and validity of assessments.
    - Post Assessment, the evidence are uploaded by Assessor to assessment agency and further assessment agency to ICES as per stipulated TAT
    - Evidence are broadly photographic and video graphics in nature (Geo-Tagged)
    - Results along with evidence to be submitted to ICES by the concerning Assessment Agency in the prescribed format and on Digital Format and Physical Format (As required)
    - Results to be uploaded on SIDH and other relevant portals for collective data management.
8. **Method of verification or validation:**
    - The process and technical audit of assessment batches are done by Awarding Body

- Attendance of each candidate is verified and it is ensured that only those candidates are assessed by assessors who are meeting the stipulated minimum percentage of attendance
- The result of each candidate is verified; it is verified that that result on SIP is matched with respect to summary sheet submitted by AAs
- Under detailed technical audit for sample batches, the knowledge and skill assessment results for each candidate are checked in technical aspect.
- All the evidence of batches are preserved on server of Awarding Body digital platform

9. On the Job:

- On job training (OJT), candidates undergo training and leaning at actual workplace for a fixed period of time and a certain weightage of assessment is allocated out of total skill weightage of Qualification Pack for undergoing OJT as stipulated by ICES. This OJT score and assessors' end point score are combined to arrive at final Marking/grading of trainees' skill test. The OJT score is determined by Supervisor / Engineer / other authorized head of departments of relevant industry under which candidates undergo on job training.
- The Assessment is subject to take place only after submission of OJT data (in case of STT only) approved by concerned industry and training provider.
- The Hard copy of the OJT report (on trainings, outcomes, exposures learnt and feedback certified by Supervisor / Engineer / other authorized head of departments of relevant industry) will be submitted to the Assessor by the concerned candidate on the Assessment date only, failing which the candidate may not be allowed for attending the Assessment.
- As OJT is mandatory for this QP, the TP should ensure the correct submission of all relevant reports pertaining to OJT of each trained candidate. The Assessment agency is responsible for collecting all the relevant information and submit the same to ICES in future (if required).

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something or how to perform a task. It is the ability to work or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do it upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
CSDCI	Construction Skill development Council of India
MCQ	Multiple Choice Question
EHS	Environment Health and Safety
IPS	Indian Patent Stone
VDF	Vacuum Dewatering Flooring