



Model Curriculum

QP Name: Chargehand Shuttering Carpenter (Elective: System Formwork / Conventional Formwork)

QP Code: CON/Q0316

QP Version: 1.0

NSQF Level: 4

Model Curriculum Version: 1.0

Construction Skill Development Council of India | Construction Skill Development Council of India (CSDCI), CPB – 103 & 104, Block-4B, DLF corporate Park, Phase – III, MG Road Gurugram – 122002
Near Guru Dronacharya Metro Station



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Training Parameters

Sector	Construction Skill Development Council of India
Sub-Sector	Real Estate and Infrastructure Construction
Occupation	Chargehand Shuttering Carpenter (Elective: System Formwork / Conventional Formwork)
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2004/9313.90
Minimum Educational Qualification and Experience	5th Standard Pass
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	02/01/2020
Next Review Date	02/01/2024
NSQC Approval Date	
QP Version	Version number 1.0
Model Curriculum Creation Date	21/01/2020
Model Curriculum Valid Up to Date	02/01/2024
Model Curriculum Version	Version number 1.0
Minimum Duration of the Course	600 hrs
Maximum Duration of the Course	600 hrs



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.

- Perform assembling and dismantling of system for complex RCC structures
- Perform assembling and dismantling of system formwork for Pre-cast segments and form finished RCC structures
- Perform erection and dismantling of jump form system
- Perform erection and dismantling of conventional formwork for heavy civil construction works
- Work effectively in a team to deliver desired results at the workplace
- Plan and organize work to meet expected outcomes
- Work according to personal health, safety and environment protocol at construction site

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
Bridge Module	8:00 hrs	0	--	--	8:00 hrs
CON/N8001 - Work effectively in a team to deliver desired results at the workplace NOS Version No.1.1 NSQF Level 4					
Work effectively in a team to deliver desired results at the workplace	07:00 hrs	17:00 hrs	--	--	24:00 hrs
CON/N8002 - Plan and organize work to meet expected outcomes NOS Version No. 1.0 NSQF Level 4					
Plan and organize work to meet expected outcomes	04:00 hrs	12:00 hrs	--	--	16:00 hrs
CON/N9001 - Work according to personal health, safety and environment protocol at construction site NOS Version No.1.4 NSQF Level 4					
Work according to personal health, safety and	12:00 hrs	26:00 hrs	--	--	38:00 hrs



environment protocol at construction site					
Total Duration	31:00 hrs	55:00 hrs	--	--	86:00 hrs

Elective Modules

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

Elective 1: System Formwork

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
CON/N0316 - Assemble & dismantle system formwork for complex RCC structure NOS Version No. 1.0 NSQF Level 4					
Assemble & dismantle system formwork for complex RCC structure	57:00 hrs	133:00 hrs	--	--	190:00 hrs
CON/N0317: Assemble & dismantle system formwork for Pre-cast segments & form finished R.C.C structures NOS Version No. 1.0 NSQF Level 4					
Assemble & dismantle system formwork for Pre-cast segments & form finished R.C.C structures	52:00 hrs	122:00 hrs	--	--	174:00 hrs
CON/N0318: Erect & dismantle jump form system NOS Version No. 1.0 NSQF Level 4					
Erect & dismantle jump form system	45:00 hrs	105:00 hrs	--	--	150:00 hrs
Total Duration	154:00 hrs	360:00 hrs	--	--	514:00 hrs

Elective 2: Conventional Formwork

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
CON/N0319: Erect and dismantle conventional					



formwork for heavy civil construction works NOS Version No. 1.0 NSQF Level 4					
Erect and dismantle conventional formwork for heavy civil construction works	154:00 hrs	560:00 hrs	--	--	514:00 hrs
Total Duration					



Module Details

Bridge Module: introduction to chargehand shuttering carpenter (Elective: system formwork/ conventional formwork) job role

Terminal Outcomes:

- Identify roles and responsibilities of a chargehand shuttering carpenter.
- Differentiate between system formwork and conventional formwork.
- Identify different career options in shuttering occupation

Duration: 08:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none">• Introduction to the job roles of Chargehand shuttering carpenter (System/ Conventional)• Discuss the difference between System and Conventional Shuttering• Discuss roles and responsibilities of chargehand shuttering carpenter (System/ Conventional)• Explain the personal attributes required for the shuttering carpentry occupation• Discuss the career options for a Chargehand shuttering carpenter	
Classroom Aids:	
Classroom of 30 student capacity, Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	



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

Mapped to CON/N8001

Terminal Outcomes:

- Demonstrate effective communication with co-workers, superiors and sub-ordinates across different teams
- Provide support to co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task.

Duration: 07:00	Duration: 17:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Interpret work sketches, shuttering carpenter works formats, permits, protocols, checklists and other work-related requirements which are to be conveyed to other team members • Explain effects and benefits of timely actions relevant to shuttering work • Explain importance of team work and its effects relevant to shuttering work • Explain importance of proper and effective communication and its adverse effects in case of failure of proper communication. 	<ul style="list-style-type: none"> • Demonstrate effective communication skills while interacting with co-workers, trade seniors and others during the assigned task. • Demonstrate effective reporting to seniors as per applicable organisational norms. • Instruct subordinates in a clear and precise manner with respect to shuttering works including situations as example • Demonstrate team work skills during assigned task
Classroom Aids:	
Classroom of 30 student capacity, Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	



Plan and organize work to meet expected outcomes

Mapped to CON/N8002

Terminal Outcomes:

- Plan the sequence of activities required to complete the given shuttering work on time.
- Organize all the resources such as materials, tools and manpower for their smooth flows.
- Optimum utilization of resources

Duration: 04:00	Duration: 12:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain how to plan shuttering carpentry activities within defined scope and duration • Explain basic concept of productivity and sequence of working • Explain requisition of resources, reporting for requirement of resources orally and in written to concerned authority 	<ul style="list-style-type: none"> • Demonstrate how to prepare requisition of resource • Demonstrate oral/ written reporting procedure to senior • Demonstrate how to handle and organize shuttering carpentry tools and equipment for bar bending work. • Demonstrate how to prioritize all works/ activities • Demonstrate optimum utilization of resources
Classroom Aids:	
Classroom of 30 student capacity, Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	



Work according to personal health, safety and environment protocol at construction site

Mapped to CON/N9001

Terminal Outcome:

- Identify various hazards at construction site
- Use PPE's for false ceiling and dry wall installation task
- Perform safe waste disposal at construction site

Duration: 08:00	Duration: 16::00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Explain the types of hazards at the construction sites and identify the hazards specific to the false ceiling and dry wall installation work. • Recall the safety control measures and actions to be taken under emergency situation. • Explain the classes of fire and types of fire extinguishers. • Explain the importance of participation of workers in safety drills. • Explain the reporting procedure to the concerned authority in case of emergency situations. • Describe the standard procedure for handling, storing and stacking of material, tools, equipment and accessories. • Explain different types of waste generated at construction site including their disposal method. • Explain the purpose and importance of vertigo test at construction site. • List out basic medical tests required for working at construction site. • Explain the types and benefits of basic ergonomic principles, which should be adopted while carrying out specific task at the construction sites. • Explain the importance of housekeeping works. 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Demonstrate the operating procedure of the fire extinguishers. • Demonstrate different methods involved in providing First aid to the affected person • Use PPEs as per work requirements during shuttering work. • Demonstrate vertigo test. • Demonstrate safe waste disposal practices followed at construction site. • Demonstrate safe housekeeping practices.
<p>Classroom Aids:</p> <p>Classroom of 30 student capacity, Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids</p>	
<p>Tools, Equipment and Other Requirements</p> <p>Leather Hand Gloves, Jump suit, Wire brush, Hand & Leg guards leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass</p>	



Assemble and dismantle system formwork for complex RCC structures

Mapped to CON/N0316

Terminal Outcome:

- Interpret drawings, schedule and work method statement to perform shuttering work as per the instruction.
- Demonstrate how to assemble system formwork for complex RCC structures (Staircase, landing, ramps, inclined structures, curved or circular structures).
- Demonstrate how to dismantle the erected system formwork after the casting for the complex RCC structures.

Duration: 60:00	Duration: 140:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Apply the basic principles of measurement, geometry and arithmetic calculation relevant to shuttering carpenter’s work • Interpret sketches and working drawings used for shuttering work • Discuss about types of Formwork (Conventional & System) • Explain different types of system formwork • State standard size of all formwork tools, material and components • Recall hand and power tools used for shuttering carpentry works with their application • List the types of release agents (shuttering oil, cream emulsions, chemical release agents) with their application • Discuss the standard procedure for assembling and dismantling system formwork for R.C.C structures (Staircase, landing, ramps, inclined structures, curved or circular structures) • Describe the general tolerance for shuttering works • Explain the concept of stripping time for removing shuttering of various R.C.C structural elements • Explain the productivity norms for shuttering of various R.C.C structural element • Explain the use of lifting gears for shifting, fixing and removing of heavy shutter panel • Discuss about stacking and storing of formwork components based on size, type and uses. • Describe about repair of formwork components and housekeeping • Explain the sequence of activity followed for R.C.C work • Recall the basics of reinforcement works, concreting works and scaffolding works 	<ul style="list-style-type: none"> • Read drawings, schedule and work method statement relevant to shuttering work • Calculate quantity of shuttering work from drawing • Estimate quantity of formwork material require from drawing • Estimate the manpower requirement based on productivity for various types of shuttering works • Demonstrate the procedure of layout for the shuttering work by using relevant drawings • Demonstrate assembling and dismantling of system formwork for R.C.C structures (Staircase, landing, ramps, inclined structures, curved or circular structures) • Check for the correctness of line, level, alignment, dimension and right angle of the erected formwork within tolerance limit • Demonstrate the procedure to report to the superior after the completion of the given shuttering work
Classroom Aids:	



Classroom of 30 student capacity, Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids

Tools, Equipment and Other Requirements

Claw Hammer, Handsaw, Tenon saw, Iron Jack Planner , Wooden Marking Gauge , Wooden Mortise Gauge, Spirit Level , Tri-Square, Auger , Steel Measuring Tape, Farmer Chisel , Farmer Chisel , Mortise Chisel , Cutting Player, Screw Driver 10", Marking Knife / Scribe , Wooden Mallet, Oil Stone (Rough / Smooth), Center Punch , Bench Vice, Hacksaw Frame with blade, Triangle file - 6mm (Medium) , Half Round File & Rasp cut file, Drill Bit, Plumb Bob, Ring Spanner , Double End Spanner, Screw Spanner 12" LM, Carpenter Working Table, Nail Bar, Measuring tape, Spirit level, Water level tube, dumpy level, auto level/ laser levelling machine, Plumb-bob, Mason's line, Lifting appliance (Sling, Shackle, Belts), Safety Helmet, Safety goggles, Safety shoes, Safety belt, Cotton gloves, Ear plugs , Reflective jackets, Dust mask, Fire Prevention kit, System formwork components and fixtures (for Staircase, landing, ramps, inclined structures, curved or circular structures), Hand held timber Cutting machine (Circular saw, Zig-jack saw), Drilling machine, Table mounted circular saw, Planing machine



Assemble and dismantle system formwork for pre-cast segments and form finished RCC structures

Mapped to CON/N0317

Terminal Outcome:

- Interpret shop drawing and other drawings (Plan, Elevation and sectional drawings) for assembling of precast and form finished structures
- Ensure the assembling and dismantling of moulds/ frames for precast structures.
- Ensure the assembling and dismantling of formwork for form finished structures.

Duration: 52:00	Duration: 124:00
Theory – Key Learning Outcomes <ul style="list-style-type: none"> • Discuss about the construction of pre-cast and form finished structures • Explain the use of shop drawing and other drawings (Plan, Elevation and sectional drawings) for assembling of precast segments moulds/frames • Describe the preparatory activities for assembling and dismantling of precast moulds/frames and form finished formwork • Discuss the different types of tools, materials and components specific to pre-cast moulds/ frames and form finished formwork • Discuss the sequence of activities adopted for precast construction (reinforcement work, fixing of block out, cast-in-services, assembling of components) • Describe the standard procedure adopted for assembling and dismantling of moulds/frames for Precast segments • Describe the standard procedure adopted for assembling and dismantling formwork for form finished structures 	Practical – Key Learning Outcomes <ul style="list-style-type: none"> • Demonstrate reading of shop drawings for assembling of pre-cast moulds/frames for pre-cast structures • Demonstrate assembling and dismantling of moulds/frames for Precast segments • Demonstrate assembling and dismantling of formwork for form finished structures • Demonstrate the procedure to report to the superior after the completion of the given formwork for pre-cast segments/ form finished RCC structures
Classroom Aids: Classroom of 30 student capacity, Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements Claw Hammer, Handsaw, Tenon saw, Iron Jack Planner , Wooden Marking Gauge , Wooden Mortise Gauge, Spirit Level , Tri-Square, Auger , Steel Measuring Tape, Farmer Chisel , Farmer Chisel , Mortise Chisel , Cutting Player, Screw Driver 10", Marking Knife / Scribe , Wooden Mallet, Oil Stone (Rough / Smooth), Centre Punch , Bench Vice, Hacksaw Frame with blade, Triangle file - 6mm (Medium) , Half Round File & Rasp cut file, Drill Bit, Plumb Bob, Ring Spanner , Double End Spanner, Screw Spanner 12" LM, Carpenter Working Table, Nail Bar, Measuring tape, Spirit level, Water level tube, dumpy level, auto level/ laser levelling machine, Plumb-bob, Mason's line, Lifting appliance (Sling, Shackle, Belts), Safety Helmet, Safety goggles, Safety shoes, Safety belt, Cotton gloves, Ear plugs , Reflective jackets, Dust mask, Fire Prevention kit, System formwork components and fixtures , cup-lock scaffolding components (set)/ frame scaffold components, 40 NB pipes, swivel coupler, fixed clamp, steel walkways, Aluminium/ GI ladder, safety net, Hand held timber Cutting machine (Circular saw, Zig-jack saw), Drilling machine, Table mounted circular saw, Planing machine	



Erect and dismantle jump form system

Mapped to CON/N0318

Terminal Outcome:

- Interpret assembling/ shop drawings and work method statement for the installation of jump form system
- Ensure assembling and dismantling of jump form system as per standard procedure

Duration: 48:00	Duration: 112:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Discuss about the specialized formwork – Climbing formwork (Jump form system and slip formwork) • Read assembling/ shop drawings and work method statement for installation of jump form system • Explain all the preparatory works involved in the installation of Jump form system • Discuss the types of cranes and hydraulic jacks used for lifting of Jump form system • Identify potential hazards associated with the Jump form system and suggest their preventive measures • List the tools and tackles, components and equipment require for installation of Jump form system • Discuss the use of fixtures and connection for the installation of Jump form system • Explain the standard procedure for profiling of formwork • Explain the standard procedure for assembling and dismantling jump form system 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Demonstrate reading of assembling/ shop drawing and work method statement for installation of jump form system • Demonstrate profiling of formwork as per required shape • Demonstrate assembling and dismantling of jump form system as per standard procedure • Demonstrate fixing of anchor cones, ties, sleeves, shear key etc.
<p>Classroom Aids:</p> <p>Classroom of 30 student capacity, Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids</p>	
<p>Tools, Equipment and Other Requirements</p> <p>Claw Hammer, Handsaw, Tenon saw, Iron Jack Planner , Wooden Marking Gauge , Wooden Mortise Gauge, Spirit Level , Tri-Square, Auger , Steel Measuring Tape, Farmer Chisel , Farmer Chisel , Mortise Chisel , Cutting Player, Screw Driver 10", Marking Knife / Scribe , Wooden Mallet, Oil Stone (Rough / Smooth), Center Punch , Bench Vice, Hacksaw Frame with blade, Triangle file - 6mm (Medium) , Half Round File & Rasp cut file, Drill Bit, Plumb Bob, Ring Spanner , Double End Spanner, Screw Spanner 12" LM, Carpenter Working Table, Nail Bar, Measuring tape, Spirit level, Water level tube, dumpy level, auto level/ laser levelling machine, Plumb-bob, Mason's line, Lifting appliance (Sling, Shackle, Belts), Safety Helmet, Safety goggles, Safety shoes, Safety belt, Cotton gloves, Ear plugs , Reflective jackets, Dust mask, Fire Prevention kit, System formwork components and fixtures , cup-lock scaffolding components (set)/ frame scaffold components, 40 NB pipes, swivel coupler, fixed clamp, steel walkways, Aluminum/ GI ladder, safety net, Hand held timber Cutting machine (Circular saw, Zig-jack saw), Drilling machine, Table mounted circular saw, Planing machine</p>	



Erect and dismantle conventional formwork for heavy civil construction works

Mapped to CON/N0319

Terminal Outcome:

- Interpret drawings, schedules and work method statement to carry out the shuttering work (conventional formwork) for heavy civil construction work
- Ensure the assembling and dismantling of conventional formwork for heavy civil construction work using steel beams, channel sections/ truss and steel shuttering sheets
- Perform all the checks on the erected formwork to determine its quality with respect to line, level and alignment

Duration: 90:00	Duration: 424:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Apply the basic principles of measurement, conversion of units, basic geometric and arithmetic calculation while carrying out the work of shuttering carpenter • Discuss the types of drawings (plan, elevation and sectional drawings etc.) used for the conventional formwork • Discuss the use of standard tools and tackles for carrying out the shuttering work • Explain the procedure of layout for shuttering work as per the drawing of heavy civil construction works • Discuss about the different types of formwork (Conventional & System) • Discuss the basics of tack welding and bolting procedures • Explain the procedure to check for levels physically/ visually and also compaction of ground surface • Discuss the standard size of all formwork tools, material and components • Explain the sequence for assembling, dismantling and stacking of form work materials • Discuss all the safety measures taken during the shuttering work such as barricading work area, fire protection etc. • Explain the checks to determine the correctness of line, level, alignment and quality of the formwork within the standard tolerance limit • Discuss the standard practices for housekeeping • Explain the basic of reinforcement work, concreting works, scaffolding works and earthwork 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Read drawings, schedule and work method statement relevant to shuttering work • Identify different types of plywood and timber which are used during shuttering (conventional formwork) work with their specifications and quality checks • Ensure the completion of all the preparatory works prior to the assembling work of the formwork (using steel beams, channel section/ truss and steel shuttering sheets) • Demonstrate how to erect/ dismantle staging using steel trestle for carrying out formwork for heavy civil construction • Demonstrate assembling and dismantling of conventional formwork for heavy civil construction work using steel beams, channel sections/ truss and steel shuttering sheets • Check for the correctness of line, level, alignment, dimension and support of the erected formwork within tolerance limit • Demonstrate the procedure to report to the superior/ engineer in-charge after the completion of the given shuttering work • Demonstrate the procedure to stake and store staging materials/ shuttering materials properly
<p>Classroom Aids:</p> <p>Classroom of 30 student capacity, Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids</p>	
<p>Tools, Equipment and Other Requirements</p>	



Claw Hammer, Handsaw, Tenon saw, Iron Jack Planner , Wooden Marking Gauge , Wooden Mortise Gauge, Spirit Level , Tri-Square, Auger , Steel Measuring Tape, Farmer Chisel , Farmer Chisel , Mortise Chisel , Cutting Player, Screw Driver 10", Marking Knife / Scribe , Wooden Mallet, Oil Stone (Rough / Smooth), Center Punch , Bench Vice, Hacksaw Frame with blade, Triangle file - 6mm (Medium) , Half Round File & Rasp cut file, Drill Bit, Plumb Bob, Ring Spanner , Double End Spanner, Screw Spanner 12" LM, Carpenter Working Table, Nail Bar, Measuring tape, Spirit level, Water level tube, Plumb-bob, Mason's line, Lifting appliance (Sling, Shackle, Belts), Safety Helmet, Safety goggles, Safety shoes, Safety belt, Cotton gloves, Ear plugs , Reflective jackets, Dust mask, Fire Prevention kit, Conventional formwork for Footing, column, wall, beam, slab, Conventional scaffolding components (set)/bamboo, bellies, pipe & coupler scaffold components , 40 NB pipes, Swivel coupler, Fixed clamp, Steel walkways, Aluminum/ GI ladder, Safety net, Tying thread



Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Post-Graduation/Graduation in Engineering	M. Tech in Civil/B. Tech in civil	2	Civil Engineering	0	Civil Engineering	As a pre-requisite for new entrant, no prior experience in training /assessment is mandatory. However, if someone with prior experience in requisite domain joins, experience will be measured in terms of relevant industry experience
Diploma	Diploma in Civil	3	Civil Engineering	0	Civil Engineering	
Graduation	General B.A./B.Sc.	6	Working experience/ supervisory work experience in shuttering carpentry work	0	Working experience/ supervisory work experience in shuttering carpentry domain	
Ex. Army /ITI /12 th pass	Graduation certificate from Army/ITI certificate in relevant trade/12 th pas	6	Working experience/ supervisory work experience in shuttering carpentry work	0	Working experience/ supervisory work experience in shuttering carpentry domain	

Trainer Certification	
Domain Certification	Platform Certification
Certified for the job role “Chargehand shuttering Carpenter (System or Conventional)” mapped to Qualification Pack “CON/Q0316, version 1.0”. Minimum accepted: 70% in each NOS and 80% overall	Certified for the job role “Trainer” mapped to QP: “MEP/Q2601” Minimum accepted score is 80%



Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Post-Graduation/Graduation in Engineering	M. Tech in Civil/B. Tech in civil	2	Civil Engineering	0	Civil Engineering	As a pre-requisite for new entrant, no prior experience in training /assessment is mandatory. However, if someone with prior experience in requisite domain joins, experience will be measured in terms of relevant industry experience
Diploma	Diploma in Civil	5	Civil Engineering	0	Civil Engineering	
Graduation	General B.A./B.Sc.	7	Working experience/ supervisory work experience in shuttering carpentry work	0	Working experience/ supervisory work experience in shuttering carpentry domain	
Ex. Army /ITI /12 th pass	Graduation certificate from Army/ITI certificate in relevant trade/12 th pas	7	Working experience/ supervisory work experience in shuttering carpentry work	0	Working experience/ supervisory work experience in shuttering carpentry domain	

Assessor Certification	
Domain Certification	Platform Certification
Certified for the job role “Chargehand shuttering Carpenter (System or Conventional)” mapped to Qualification Pack “CON/Q0316, version 1.0”. Minimum accepted: 70% in each NOS and 80% overall	80% in each NOS of Qualification Pack “MEP/Q27012”, and overall 80%



Assessment strategy

Assessment system Overview

Assessment is done through CSDCI affiliated Assessment Body. Assessors are trained & certified by CSDCI after training of assessor's program. Assessments is conducted to gauge and assess the trainee's skill and knowledge competency in the specified areas. The assessment will have both theory and practical components in 30:70 ratio for Chargehand Shuttering Carpenter V1.0 (Elective: System/ Conventional formwork) 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 CSDCI. The Assessor submits an assessment plan to CSDCI 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 and practical 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 and
- Where appropriate, any supplementary criteria used to make a judgment on the level of performance.

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.

The knowledge/theory assessments are conducted with proper seating arrangements with enough space between the candidates to prevent copying.

Question set for theory and practical will be distributed to each candidate by the Assessor. Theory testing will include multiple choice questions, pictorial question, etc. which will test the trainee on his theoretical knowledge of the subject. The skill /practical assessments will be conducted in the approved test centers. The Assessment agency/ Assessor will ensure adequate tools and materials are available to conduct the practical test.

The theory and practical assessments will be carried out on same day. If number of candidates are more than 20, more assessors will be organized on same day to complete the assessment.

The assessment has to comprise of two components, namely:

1. Knowledge assessment (theory/viva assessment)
2. Skill assessment (practical/hands-on skill assessment)

Mode of assessment

1. Demonstration/Practical for Performance /Skill Assessment
 1. Synoptic multiple-choice question test
 2. Viva
- } for Knowledge Assessment

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.

Knowledge Assessment: The knowledge assessments are conducted through written test/ viva.

Synoptic test is used for this. It is an MCQ (Multiple Choice Question) test which are prepared externally and externally marked, meaning by agency having no link with training partners. The test may be conducted by the assessor in the oral mode, if required, considering the lack of reading and comprehending acumen (skills) of trainees. In such cases, the assessor will mention it on top of the MCQ submitted to CSDCI.

The assessment strategy, weightage and duration of assessment for helper mason is summarized below:

Assessment				
Assessment Type	Formative or Summative	Strategies	Weightage	Duration (hours)
Knowledge	Summative	MCQ/ Viva	30	1.5
Skill	Summative	Structured practical tasks	70	5.5

Assessment Quality Assurance framework

CSDCI has developed assessment criteria framework for each Qualification pack as per National Occupational Standards (NOS). The criteria framework includes weightages/marks for each criterion under knowledge and skill. The criteria ensure quality assurance as it ensures valid, consistent and fair assessments at all locations. Issued to the affiliated Assessment body. The Assessment body develop questions based on CSDCI issued assessment criteria.

Evidences in the form of answer sheets in case of knowledge assessments are collected. For skill assessments videos and photographs are prepared as evidence. These are submitted by the assessor to the assessment agency. CSDCI does random checks of the same with the participant/ trainee's ID and ascertains authenticity and validity of assessments.



The training partner will intimate the time of arrival of the assessor and time of leaving the venue. Random spot checks/audit is conducted by CSDCI to monitor assessment.

Methods of Validation

Unless the trainee is registered, the person cannot undergo assessment. To further ensure that the person registered is the person appearing for assessment, ID verification is carried out. Aadhar card number is part of registering the candidate for training. This forms the basis of further verification during the assessment.

Assessor conducts the assessment through theory and practical questions developed in accordance with the assessment criteria and guidelines issued by CSDCI. This too is verified by random audits carried out by CSDCI.

Video of the practical session is prepared and submitted to CSDCI for verification as per demand.

Assessment agency is responsible to put details in SIP. CSDCI will also validate the data and result received from the assessment agency.

Method of assessment documentation and access

The assessment agency will upload the result of assessment in the portal. The data will not be accessible for change by the assessment agency after the upload. The assessment data will be validated by CSDCI assessment team. After upload, only CSDCI can access this data.

CSDCI approves the results within a week and uploads it on SIP.