



Model Curriculum

QP Name: Supervisor Structure (Technical)

QP Code: CON/Q0111

QP Version: 2.0

NSQF Level: 6

Model Curriculum Version: 1.0

Construction Skill Development Council of India | Construction Skill Development Council of India (CSDCCI), CPB – 201 and 202, Block-4B, DLF corporate Park, Phase – III, MG Road Gurugram – 122002
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Training Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure Construction
Occupation	Masonry
Country	India
NSQF Level	6
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3112.9900
Minimum Educational Qualification and Experience	Diploma (after 12 class) with 3 Years of experience in relevant field OR Graduate (in relevant field) with 1 Year of experience OR Certificate-NSQF (level 5) with 3 Years of experience in relevant field
Pre-Requisite License or Training	N.A.
Minimum Job Entry Age	18 Years
Last Reviewed On	31/03/2022
Next Review Date	31/03/2025
NSQC Approval Date	31/03/2022
QP Version	Version number 2.0
Model Curriculum Creation Date	
Model Curriculum Valid Up to Date	31/03/2025
Model Curriculum Version	Version number 1.0
Minimum Duration of the Course	660 hrs
Maximum Duration of the Course	660 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.

- Read the various drawings/ sketches/ plans, specifications and standards, and prepare work method statement relevant to masonry, bar bending, concreting, scaffolding and shuttering carpentry works.
- Prepare simplified sketches from the architectural/ structural drawings.
- Interpret various types of drawings/ sketches related to making of shutters and assembling of formwork.
- Discuss about the different types of timber and plywood suitable for the formwork.
- Explain the sequential activity for shuttering of different structural elements using various types of formwork system.
- Discuss the different types of architectural drawing, Indian standards and specifications for concreting works.
- Estimate the quantity of materials, tools, equipment and manpower required as per the given drawings.
- Elaborate the sequence of concrete pouring for casting of RCC structure.
- Discuss the different types of architectural drawing, Indian standards and specifications for bar bending works.
- Estimate the quantity of materials, tools, equipment and manpower required as per the given drawings.
- Elaborate the sequence of placing and fixing reinforcement bars for different types of structural elements.
- Discuss the different types of architectural drawing, Indian standards and specifications for scaffolding work.
- Estimate the quantity of materials, tools, equipment and manpower required as per the given drawings.
- Elaborate the sequence for scaffolding work using various types of scaffolding system (Cup-lock, frame scaffolding, customized scaffolding)
- Explain the methods of allocating targets to the worker's gangs and subordinates as per the work plan/ schedule.
- Discuss about the supervising methods and performance evaluating techniques of workers/ subordinates/ gangs.
- Discuss about maintaining healthy and safe working environment at the construction site.
- Identify risks and other emergency situations at the workplace and respond accordingly to minimize risk.
- Explain methods of sanitization and infection control measures followed at the 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 (Hrs.)	Practical Duration (Hrs.)	On-the-Job Training Duration (Mandatory) (Hrs.)	On-the-Job Training Duration (Recommended) (Hrs.)	Total Duration (Hrs.)
<i>Bridge Module</i>	08:00	00:00	00:00	00:00	08:00
CON/N0132 Read and interpret drawings, specifications and standards for structural execution NOS Version No.2.0 NSQF Level 6	52:00	00:00	60:00	00:00	112:00
<i>Read and interpret drawings, specifications and standards for structural execution</i>	52:00	00:00	60:00	00:00	112:00
CON/N0134 Plan, supervise and monitor execution of System/shuttering Carpentry works NOS Version No.2.0 NSQF Level 6	60:00	00:00	60:00	00:00	120:00
<i>Plan, supervise and monitor execution of System/shuttering Carpentry works</i>	60:00	00:00	60:00	00:00	120:00
CON/N0135 Plan, supervise and monitor execution of concreting works NOS Version No. 2.0 NSQF Level 6	60:00	00:00	60:00	00:00	120:00
<i>Plan, supervise and monitor execution of concreting works</i>	60:00	00:00	60:00	00:00	120:00
CON/N0136 Plan, supervise and monitor execution of bar-bending works NOS Version No. 2.0 NSQF Level 6	60:00	00:00	60:00	00:00	120:00
<i>Plan, supervise and monitor execution of bar-bending works</i>	60:00	00:00	60:00	00:00	120:00
CON/N0137 Plan, supervise and monitor	60:00	00:00	60:00	00:00	120:00



<i>execution of scaffolding works</i> NOS Version No. 2.0 NSQF Level 6					
<i>Plan, supervise and monitor execution of scaffolding works</i>	60:00	00:00	60:00	00:00	120:00
CON/N8003 Supervise, monitor and evaluate performance of subordinates at workplace NOS Version No. 2.0 NSQF Level 6	15:00	00:00	15:00	00:00	30:00
<i>Supervise, monitor and evaluate performance of subordinates at workplace</i>	15:00	00:00	15:00	00:00	30:00
CON/N9002 Manage workplace for safe and healthy work environment NOS Version No. 2.0 NSQF Level 6	15:00	00:00	15:00	00:00	30:00
<i>Manage safety and healthy at workplace</i>	15:00	00:00	15:00	00:00	30:00
Total Duration	330:00	00:00	330:00	00:00	660:00



Module Details

Module 1: Introduction to Supervisor Structure

Bridge Module

Terminal Outcomes:

- Explain the role and responsibilities of the Supervisor Structure.
- Discuss the career progression for the Supervisor Structure.

Duration: 08:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none">• Describe the role and responsibilities of a Supervisor Structure.• Define the personal attributes required in masonry occupation.• Explain the future possible progression and career development options of a Supervisor Structure	
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	
N/A	



Module 2: Read and interpret drawings, specifications and standards for structural execution

Mapped to CON/N0132, v 2.0

Terminal Outcomes:

- Read the various drawings/ sketches/ plans, specifications and standards, and prepare work method statement relevant to masonry, bar bending, concreting, scaffolding and shuttering carpentry works.
- Prepare simplified sketches from the architectural/ structural drawings.

Duration: 52:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the different types of architectural drawings, structural drawings and specifications for masonry, bar bending, concreting, scaffolding and shuttering carpentry works. • Explain the procedure to read plan, elevation and sectional drawings relevant to the given work. • Interpret the drawing for masonry, bar bending, concreting, scaffolding and shuttering carpentry. • Prepare the simplified sketches from the architectural/ structural drawings • Discuss the work schedule for masonry, bar bending, concreting, scaffolding and shuttering carpentry works. • Describe the standards and specifications for the execution of masonry, bar bending, concreting, scaffolding and shuttering carpentry works. • Elaborate the manufacturer’s specification and work method statement for masonry, bar bending, concreting, scaffolding and shuttering carpentry works. 	
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	



Module 3: Plan, supervise and monitor execution of System/shuttering Carpentry works

Mapped to CON/N0134, v 2.0

Terminal Outcomes:

- Interpret various types of drawings/ sketches related to making of shutters and assembling of formwork.
- Discuss about the different types of timber and plywood suitable for the formwork.
- Explain the sequential activity for shuttering of different structural elements using various types of formwork system.

Duration: 60:00	Duration: 00:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Interpret the general arrangement drawing/ plans/ structural drawings, formwork drawing and sketches. • Discuss the guidelines provided in Indian Standard code of practice applicable for shuttering carpentry tasks. • Explain the sequential activity for shuttering of different structural elements using various types of formwork system. • Discuss about the visual quality checks for timber and plywood and other formwork materials. • Elaborate on wooden shutter making, and fabrication of wooden/steel shutter boards. • Elaborate about the role of staging for the shuttering works as per standard practice. • Discuss about the tools, consumables, materials and equipment related to shuttering carpentry works. • Describe the procedure for installation and operations for jump form system including use of cranes and hydraulic system. • Explain the rigging procedures ensuring safe lifting, lowering and shifting of heavy materials. • Brief on the storing and stacking of formwork material. • Explain the productivity norms for shuttering carpentry works. • Estimate the manpower, materials and machinery requirement for the given shuttering work. 	<p>Practical – Key Learning Outcomes</p>
<p>Classroom Aids:</p> <p>Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids</p>	
<p>Tools, Equipment and Other Requirements</p>	



Module 4: Plan, supervise and monitor execution of concreting works

Mapped to CON/N0135, v 2.0

Terminal Outcomes:

- Discuss the different types of architectural drawing, Indian standards and specifications for concreting works.
- Estimate the quantity of materials, tools, equipment and manpower required as per the given drawings.
- Elaborate the sequence of concrete pouring for casting of RCC structure.

Duration: 60:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the different types of architectural drawing, Indian standards and specifications for concreting works. • Elaborate the manufacturer’s specification and work method statement for concreting works. • Discuss about the tools and equipment used for concreting works. • Estimate the quantity of materials, tools, equipment and manpower required as per the given drawings. • Discuss the methodology of concreting works for horizontal, vertical and inclined surface. • Explain the specification of different grades of concrete. • Describe the different type of high-quality concrete finish. • Elaborate the sequence of concrete pouring for casting of RCC structure. • Discuss the variation of slump w.r.t time and rate of concrete pouring. • Explain the methods to use concrete vibrator in congested areas. • Describe the concept of construction joints/cold joints. • State the curing technique for newly casted RCC structure. • Discuss the concept of self-compacted concrete (SCC). • State the initial and final setting of concrete and their test to verify. • Discuss about the correct positioning of the pump hose when pumping the SCC. • Explain the methodology for hot/cold weather concreting works. • Describe the effect of wind breaks, and wind velocity on the ongoing concreting work. • Elaborate the use of different types of evaporative retarder/anti-freeze compound. • Discuss the various types of defects in concrete and their remedies. 	
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	



Module 5: Plan, supervise and monitor execution of bar-bending works

Mapped to CON/N0136, v 2.0

Terminal Outcomes:

- Discuss the different types of architectural drawing, Indian standards and specifications for bar bending works.
- Estimate the quantity of materials, tools, equipment and manpower required as per the given drawings.
- Elaborate the sequence of placing and fixing reinforcement bars for different types of structural elements.

Duration: 60:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Interpret the general arrangement drawings/ and bar bending schedule • Discuss the standard operation procedure for power tools and CNC machine for cutting and bending machines. • Explain the sequence of placing and fixing reinforcement bars for different types of structural elements. • Discuss about the placing and fixing of inserts, sleeves, conduits and anchors within the reinforcement cage/ mesh for various RCC structure. • State various tools, consumables, materials and equipment related to bar bending works • Explain the unloading process of steel reinforcement at the site store yard. • Discuss about the storing and stacking of reinforcement steel at the yard. • Describe the methods of mechanical connection of reinforcement bars. • Discuss about the pre-fabricated cage and its erection process. • Explain the methods to optimize the use steel rods during its cutting and bending. • Explain the productivity norms for the reinforcement works. • Estimate the manpower, materials and machinery requirement for the reinforcement work. 	
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	
N/A	



Module 6: Plan, supervise and monitor execution of scaffolding works

Mapped to CON/N0137, v.6.0

Terminal Outcomes:

- Discuss the different types of architectural drawing, Indian standards and specifications for scaffolding work.
- Estimate the quantity of materials, tools, equipment and manpower required as per the given drawings.
- Elaborate the sequence for scaffolding work using various types of scaffolding system (Cup-lock, frame scaffolding, customized scaffolding)

Duration: 60:00	Duration: 00:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> • Discuss the general arrangement drawing/ structural drawings and formwork drawing. • Explain the sequential activities for scaffolding work using various types of scaffolding system (Cup-lock, frame scaffolding, customized scaffolding) • Brief about the visual quality checks for scaffolding materials and ground compactness. • Elaborate on various materials and components of different types of scaffolding system (Cup-lock, Tube and clamp, Ring lock, Wedge lock, Frame scaffolding and customized scaffolding). • Discuss about the tools, consumables and equipment related to the scaffolding works • Brief about the lifting, lowering and shifting of scaffolding material. • Explain the storing and stacking methods for scaffolding material. • Discuss on the productivity norms for scaffolding works. • Estimate the manpower, materials and machinery requirements for the scaffolding work • Elaborate the hazards related to scaffolding (pinch points, hot surfaces, electrical) and prevention measures. • Describe the procedure for scaffold inspection. 	<p>Practical – Key Learning Outcomes</p>
<p>Classroom Aids:</p> <p>Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids</p>	
<p>Tools, Equipment and Other Requirements</p> <p>N/A</p>	



Module 7: Supervise, monitor and evaluate performance of subordinates at workplace

Mapped to CON/N8003, v.2.0

Terminal Outcome:

- Explain the methods of allocating targets to the worker’s gangs and subordinates as per the work plan/ schedule.
- Discuss about the supervising methods and performance evaluating techniques of workers/ subordinates/ gangs.

Duration: 15:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the procedures and policies regarding the performance evaluation and appraisal of the construction workers/ subordinates. • Explain the methods to assign and track the work targets given to the various worker’s gangs and subordinates. • Describe the checks/ procedures to ensure the quality/ accuracy of the completed work/ task as per standard practices. • Discuss the inclusion of activities and practices into the construction work which are sensitive towards PWD (Person with disabilities), Cultural diversity and gender equality. 	
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	
N/A	



Module 8: Manage safety and healthy workplace

Mapped to CON/N9002, v 2.0

Terminal Outcome:

- Discuss about maintaining healthy and safe working environment at the construction site.
- Identify risks and other emergency situations at the workplace and respond accordingly to minimize risk.
- Explain methods of sanitization and infection control measures followed at the construction site.

Duration: 15:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the various types of hazards at construction site and procedures to respond in case of any emergency or accidents. • Discuss about the various personal protective equipment (PPE) used during various construction works. • Describe the safe work practices to be followed while performing task. • Discuss the methods to ensure the workplace safety and good health of workers. • Explain the safe ways for using tools, tackles, equipment and materials as specified by Environment, Health and Safety (EHS) department. • Discuss the policies, guidelines and other requirements related to workplace safety as per EHS department/ government norms. • Describe the various types of infectious disease, their symptoms and control, at the construction site. • Discuss the medical guidelines, national legislation, local policies and protocols regarding spread of infectious disease. 	
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, personal protective equipment (PPE), organizational and statutory documents for EHS	



Module 9: On-the-Job Training

Mapped to Supervisor Structure (Technical) V2.0

CON/N0132 V. 2.0, Mandatory Duration: 60:00	Recommended Duration:
Location: On Site	
<ul style="list-style-type: none"> • Demonstrate reading and understanding details from relevant drawings • Demonstrate reading and understanding details from schedule of work • Demonstrate reading and understanding specification and standards provided for relevant works • Demonstrate reading and understanding of specification provided in the relevant drawing • Demonstrate reading and understanding of schedule provided for completion of work • Demonstrate reading and understanding of method statement for execution of work • Demonstrate reading and understanding of manufactures specification for operation of power tools • Calculate quantity of materials, time and resources required from relevant schematic working drawings • Demonstrate process to convey structural changes to workman by making a simplified sketch 	
CON/N0134 V. 2.0, Mandatory Duration: 60:00	
Location: On Site	
<ul style="list-style-type: none"> • Demonstrate reading of numeration /general arrangement drawing • Demonstrate reading of formwork drawing • Demonstrate use of advance power tools related to formwork carpentry • Demonstration visual quality check for timber, plywood and another formwork material • Demonstration for checking of wooden shutter boards for their size, support, stability • Demonstration for checking of fabricated metal shutter boards • Demonstration for checking of staging and other associated support • Demonstrate how to carried out checking for shuttering within tolerance as per drawing • Describe procedure of installation and operation for jump form system • Describe standard method for loading, unloading, storing and stacking of formwork material in yard/site and identification of wrong handling of formwork material • Calculation of man, and time requirement based on productivity norms for shuttering work • Calculation of shuttering material • Demonstration of generic and trade safety • HSE compliance related to shuttering works 	
CON/N0135 V. 2.0, Mandatory Duration: 60:00	
Location: On Site	
<ul style="list-style-type: none"> • Demonstrate planning and scheduling of projects by making schedule plan • estimate time and materials required for task • Demonstrate process of maintaining records and file and carry out preparation of reports for concreting works • Demonstrate supervision of concreting task such as form finish concrete structure, complex structure, slip form concreting and concreting in extreme weather • Carry out estimates of personnel required for a job • Demonstrate checks to inspect work progress, equipment to ensure work as per quality and safety 	



- Demonstrate recording of information such as personnel, production, or operational data, details of the concreting works covering grade of concrete, area and volume of pour, number of workers, tools and equipment deployed for work and achieved productivity on specified forms or reports
- Carry out analysis of the more complex construction or repair jobs to determine methods and materials
- Carry out coordinating work activities with other construction project activities
- Carry out coordinating with batching plant and construction site confirming continuity of supply of concrete
- check, inspect and ensure completion of preparatory works prior to concreting at construction site/yard
- Perform checks to inspect bracing and shoring of concrete forms to ensure their stability before and during pouring
- Perform checks to inspect the fixing and setting of pump line, machinery for pouring of concrete
- Provide instruction on the use of suitable type of pump w.r.t the discharge and head of concrete
- indicate positions for pouring chutes and runways, cranes, or paving machines to facilitate conveying concrete from mixer to forms
- direct and monitor workers who spread, vibrate, screed, and float concrete to ensure that concrete is compacted to desired consistency and surface is finished to specified uniformity and smoothness
- check for bulking and loose formwork during concreting
- Perform checks to ensure execution of concreting in extreme hot/cold weather

CON/N0136 V. 2.0, Mandatory Duration: 60:00

Location: On Site

- Demonstrate reading of numeration /general arrangement drawing
 - Demonstrate reading of bar bending schedule
 - Demonstrate use of power tools for cutting and bending of reinforcement bar
 - Describe the working procedure of CNC machine for cutting and bending of reinforcement steel and stirrups making
 - Demonstrate the inputs method in the CNC machine.
 - Describe reinforcement steel work procedure related to placing and fixing for different types of structures and their element
 - Describe standard method for storing and stacking of reinforcement steel in yard and identification of wrong handling of reinforcement steel
 - Monitoring of reinforcement steel works in yard/site (cutting, bending, tagging)
 - Demonstration of different types mechanical coupler fixing
 - Demonstrate the pre-fabricated rebar cage making and erection process.
 - How to organize cutting of steel based on cutting length requirement
 - Calculation of man and time requirement based on productivity norms for reinforcement works
 - Calculation of reinforcement steel
 - Demonstration of generic and trade safety
 - HSE compliance related to reinforcement works
- Note: Points marked with asterisk can be checked if facility is available for CNC machine



CON/0137 V.6.0 Mandatory Duration: 60:00

Location: On Site

- Demonstrate reading of scaffolding drawing
- Demonstration visual quality check for scaffolding material
- Demonstration visual quality check for ground compactness
- Demonstration for checking of scaffolding and other associated support
- Demonstrate how to check erected scaffolding as per drawing
- Describe procedure of installation and operation for jump form system
- Describe standard method for loading, unloading, storing and stacking of formwork material in yard/site and identification of wrong handling of formwork material
- Calculation of man and time requirement based on productivity norms for scaffolding works
- Calculation of scaffolding material
- Demonstration of generic and trade safety

CON/8003 V.6.0 Mandatory Duration: 15:00

Location: On Site

- Demonstrate the methods to set the targets for the gangs of workers as per their expertise/skill and requirement at the construction site.
- Identify and set the performance standards for each of the workers in the gangs as per their skills and responsibilities.
- Demonstrate the methods to inspect and supervise the work activities of worker's gangs and subordinates at the construction site.
- Implement the effective methods to monitor, evaluate, and record overall performance/productivity of the subordinates and other workers at the construction site.
- Ensure that all the relevant organisational policies and procedures are followed during the execution of the construction activities.
- Demonstrate the all gender sensitive and inclusive work environment at the construction site as per the statutory/ organisational rule.

CON/9002 V 6.0, Mandatory Duration: 15:00

Location: On Site

- Ensure that all the safety and protection installation at construction site are adequate and correctly placed.
- Demonstrate effective implementation of the health and safety plan for all the subordinates at the construction site.
- Perform checks to ensure the safe handling, stacking and storing of tools, tackles, equipment and materials at the work place.
- Demonstrate effective use of proper PPE by the subordinates.
- Demonstrate provision for proper entrance and exit from confined spaces, excavated pits and other locations of workplace, as per safety recommendations.
- Demonstrate the use of fire protection equipment for different type of fire hazard.
- Demonstrate ways to create awareness about organisational policies and procedures associated with health, safety and welfare of construction workers.



- Demonstrate the procedures for identifying, recording and reporting of hazards/accidents/ hazard of any infectious disease/ pandemic as per organizational and statutory requirements.
- Ensure effective adherence to response to emergency procedures / protocols.
- Demonstrate effective implementation of control measures to reduce risks.
- Demonstrate vertigo test.
- Demonstrate the practices to maintain personal hygiene, workplace hygiene and site/ workplace sanitization.
- Ensure proper housekeeping at the workplace.

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, personal protective equipment (PPE), organizational and statutory documents for EHS



Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Post-Graduation/Graduation in Engineering	Civil /Mechanical Engineering	Two	Civil /Mechanical Engineering	0	Civil/Mechanical 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	Civil /Mechanical Engineering	Five	Civil /Mechanical Engineering	0	Civil /Mechanical Engineering	
Graduation/ Ex. Army /ITI /12 th pass	Any Graduation, certificate from Army/ITI certificate in relevant trade/12 th pas.	Eight	Working Experience as Supervisor Structure/ supervisory role in Masonry domain	0	Working Experience as Supervisor Structure/ supervisory role in Masonry domain	

Trainer Certification	
Domain Certification	Platform Certification
Trainer- 80 % in each NOS of Qualification Pack “Supervisor Structure(Technical) CON/Q0111 v2.0” and 80% overall.	Trainers - 80% in each NOS of Qualification Pack “Trainer MEP/Q2601, v1.0”and 80% overall.



Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Post-Graduation/Graduation in Engineering	Civil/Mechanical Engineering	Seven	Civil/Mechanical Engineering	0	Civil/Mechanical Engineering	As a prerequisite 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	Civil/Mechanical Engineering	Ten	Civil/Mechanical Engineering	0	Civil/Mechanical Engineering	
Graduation/ Ex. Army /ITI /12 th pass	Any Graduation, certificate from Army/ITI certificate in relevant trade/12 th pas.	Thirteen	Working Experience as Supervisor Structure/supervisory role in Masonry domain	0	Working Experience as Supervisor Structure/supervisory role in Masonry domain	

Assessor Certification	
Domain Certification	Platform Certification
Assessor- 80 % in each NOS of Qualification Pack “Supervisor Structure(technical) CON/Q0111 v2.0” and 80% overall.	Assessors- 80% in each NOS of Qualification Pack “Assessor MEP/Q2701, v1.0” and overall 80%.



Assessment strategy

Assessment system Overview

Assessment is done through CSDCI affiliated Assessment Agencies. Assessors are trained and certified by CSDCI after training of assessors 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 50:50 ratio for Supervisor Structure 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 is 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 training provider will ensure adequate tools and materials are available to conduct the practical test.

If number of candidates are more than 30, 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
 2. Synoptic multiple choice question test
 3. 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 Supervisor Site EHS is summarized below

Assessment Type	Formative or Summative	Strategies	Weightage	Duration (hours)
Knowledge	Summative	MCQ/Viva	50	2.5
Skill	Summative	Structured practical task	25	3.0
Skill	Formative	Structured practical task	25	1.5

Assessment Quality Assurance framework

CSDCI has developed assessment criteria framework for each Qualification pack as per National Occupational Standards. The criteria framework includes weightages/marks for each criteria under knowledge and skill. The criteria ensures 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.

Evidences for assessments are to be collected 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 five days after which results are uploaded on SIP by Assessment Agency.



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 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
PPEs	Personal Protective Equipment
RCC	Reinforced Cement Concrete