Model Curriculum

QP Name: Rural Mason (Electives: General/ Bamboo structure) (Options: Compresses Stabilized Earth Block (CSEB)/ Random Rubble Masonry (RRB)

QP Code: CON/Q3603

QP Version: 2.0

NSQF Level: 4

Model Curriculum Version: 1.0

Construction Skill Development Council of India|| Construction Skill Development Council of India (CSDCCI), CPB – 103 and 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
Sub-Sector	Rural Infrastructure construction
Occupation	Masonry - Rural
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/NIL
Minimum Educational Qualification and Experience	8th Class with 2 Years of experience OR Certificate-NSQF (level 3) with 2 Years of experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	31/03/2022
Next Review Date	31/03/2025
NSQC Approval Date	31/03/2025
QP Version	Version number 2.0
Model Curriculum Creation Date	02/01/2021
Model Curriculum Valid Up to Date	31/03/2025
Model Curriculum Version	Version number 1.0
Minimum Duration of the Course	390 hrs
Maximum Duration of the Course	750 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.

- Explain the role and responsibilities of Rural Mason (General/ Bamboo structure).
- Discuss the career progression for the job role for Rural Mason (General/ Bamboo structure).
  Demonstrate transfer of levels as per drawings/instructions.
- Demonstrate the setting out of the layout as per drawings/instructions.
- Demonstrate transfer of levels as per drawings/instructions.
- Demonstrate the setting out of the layout as per drawings/instructions.
- Perform preparatory activities for brick/block masonry work
- Demonstrate brick/block masonry work in construction of load bearing / non-load bearing wall, columns, footings and soak pits / septic tanks.
- Demonstrate pointing work for brick/block masonry.
- Demonstrate fixing of ready-to-install doors, windows and ventilators.
- Demonstrate preparation of sub base for IPS flooring.
- Demonstrate manual mixing of concrete.
- Demonstrate pouring and tamping of concrete.
- Demonstrate prioritizing of work activities to achieve the desired productivity.
- Demonstrate organizing of resources as per work plan prior to commencement of work.
- Use hand tools for making wooden shutter board
- Carry out shuttering works in rural construction for R.C.C footing, column, beam and slab
- Carry out scaffolding works using bamboo/ballies or pipes and coupler for supporting rural construction activities
- Carry out preparatory work before pouring of manual concrete
- Carry out pouring and compaction of concrete
- Finish and cure concrete
- Carry out selection and harvesting of bamboo
- Perform treatment of bamboo
- Carry out selection, stacking and performing visual quality checks of treated bamboo for use in construction
- Carry out cutting, shaping drilling and jointing of treated bamboo members for making of mat, posts, joints, ties, beams and bracing used for building construction
- Carry out preparatory works for construction of simple rural building.
- Carry out erection of superstructure with bamboo components.
- Carry out erection of roofing truss, purlins, ties, bracings etc.
- Fix roof cladding, CGI or bamboo sheets.
- Carry out the seismic and wind safety protection measures in bamboo building
- Carry out preparatory activities for masonry work
- Carry out visual checks on CSEB and test soil types to prepare stabilized sand-mud mortar for carrying out masonry, pointing and plastering work
- Lay CSEB for construction of load bearing / non-load bearing wall, columns.
- Carry out fixing of door and window frames in CSEB masonry wall of different block sizes
- Carry out pointing in CSEB masonry of different block sizes.

- Carry out preparatory work for rubble masonry
- Lay out coursed and un-coursed Random Rubble Masonry with undressed or hammer dressed stones
- Carry out flush /raised pointing in stone masonry

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)
Bridge Module	08:00	00:00	--	--	**08:00**
CON/N3601 Mark layout for foundation, walls, soak pit/septic tank and monitor earthwork activities for rural construction NOS Version No. 2.0 NSQF Level 4	**07:00**		**45:00**	**--**	**52:00**
Carry out layout marking	07:00		45:00	--	52:00
CON/N3608 *Install sanitary fitting and fixtures in rural toilets* NOS Version No. 2.0 NSQF Level 4	**07:30**		**22:30**	**--**	**30:00**
Perform brick laying	07:30		22:30	--	30:00
Total Duration	**22:30**		**67:30**		**90:00**

Elective Modules

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

Elective 1: General

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)
CON/N3602 *Build brick / block masonry structures for rural construction* **NOS Version No.2.0** **NSQF Level 4**	**15:00**		**45:00**	**--**	**60:00**
Perform brick/ block masonry work	15:00		45:00	--	60:00
CON/N3604 *Carry out IPS flooring in rural construction* **NOS Version No.2.0** **NSQF Level 4**	**15:00**		**45:00**	**--**	**60:00**
Perform IPS flooring	15:00		45:00	--	60:00
CON/N3605 *Carry out reinforcement steel works for R.C.C structures in rural construction* **NOS Version No.2.0** **NSQF Level 4**	**22:30**		**37:30**	**--**	**60:00**
Perform bar bending work	22:30		37:30	--	60:00
CON/N3606 *Carry out shuttering works in rural construction* **NOS Version No.2.0** **NSQF Level 4**	**22:30**		**37:30**	**--**	**60:00**
Perform shuttering works	22:30		37:30	--	60:00
CON/N3607 *Carry out manual concreting in rural construction* **NOS Version No.2.0** **NSQF Level 4**	**22:30**		**37:30**	**--**	**60:00**
Perform manual concreting work	22:30		37:30	--	60:00
Total Duration	**97:30**		**202:30**	**--**	**300:00**

Elective 2: Bamboo structure

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)
CON/N3621 *Select, harvest and prepare the bamboo for the construction works* **NOS Version No.1.0** **NSQF Level 4**	**15:00**		**45:00**	**--**	**60:00**
Perform harvesting and preparation of bamboo	15:00		45:00	--	60:00
CON/N3622 *Select, stack and perform visual quality checks on bamboo used for construction purpose* **NOS Version No.1.0** **NSQF Level 4**	**15:00**		**45:00**	**--**	**60:00**
Perform visual quality checks on bamboo	15:00		45:00	--	60:00
CON/N3623 *Cut, shape, drill and join treated bamboo for making of mat, posts, joints, ties, beams and bracing used for building construction* **NOS Version No.1.0** **NSQF Level 4**	**22:30**		**37:30**	**--**	**60:00**
Prepare mat, posts, joints and tie beams from treated bamboo	22:30		37:30	--	60:00
CON/N3624 *Construct simple rural buildings with treated bamboo* **NOS Version No.1.0** **NSQF Level 4**	**22:30**		**37:30**	**--**	**60:00**
Construct rural buildings with treated bamboo	22:30		37:30	--	60:00
CON/N3625 *Follow seismic and wind safety protection measures for bamboo buildings* **NOS Version No.2.0** **NSQF Level 4**	**22:30**		**37:30**	**--**	**60:00**
Perform seismic and wind safety measures	22:30		37:30	--	60:00

Total Duration	**97:30**		**202:30**	--	**300:00**

Optional Modules

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

Option 1: Compresses Stabilized Earth Block (CSEB)

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)
CON/N3626 *Construct buildings using Compresses Stabilized Earth Block (CSEB)* NOS Version No.1.0 NSQF Level 4	**07:30**	**22:30**	--	--	**30:00**
Construct building using compresses stabilized earth block	07:30	22:30	--	--	30:00
Total Duration	**07:30**	**22:30**	--	--	**30:00**

Option 2: Random Rubble Masonry (RRB)

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)
CON/N3603 *Build structures using random rubble masonry for rural construction* NOS Version No.2.0 NSQF Level 4	**07:30**	**22:30**	--	--	**30:00**
Perform Random rubble masonry works	07:30	22:30	--	--	30:00
Total Duration	**07:30**	**22:30**	--	--	**30:00**

Module Details

Module 1: Introduction to the job role of Rural Mason (General/ Bamboo structure)

Bridge Module

Terminal Outcomes:

- Explain the role and responsibilities of Rural Mason (General/ Bamboo structure).
- Discuss the career progression for the job role for Rural Mason (General/ Bamboo structure).

Duration: *08:00*	**Duration**: *00:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the role and responsibilities of Brick Mason (general/ plastering). • Define the personal attributes required in masonry occupation. • Explain the future possible progression and career development options of a Rural Mason (General/ Bamboo structure).	
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	
N/A	

Module 2: Mark layout for foundation, walls, soak pit/septic tank and monitor earthwork activities for rural construction

Mapped to CON/N3601 v 2.0

Terminal Outcomes:

- Demonstrate transfer of levels as per drawings/instructions.
- Demonstrate the setting out of the layout as per drawings/instructions.

Duration: *07:00*	**Duration**: *00:00,* **OJT:** *45:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Interpret the sketches/basic working drawing for brick/block • Describe the basic principles of measurement, simple arithmetic's and conversion of units of measurement • Explain the process of 3-4-5 method. • Explain the use of levelling instruments like spirit level and water levelling and their setting. • Explain the process of transferring levels. • Explain the use of tools for marking of layout and checks for their serviceability.	• Performing checks to confirm workability of tools. • Demonstrate transfer of levels as per drawings/instructions. • Demonstrate the setting out of the layout as per drawings/instructions. • Demonstrate marking of the centre lines of a room by 3-4-5 method • Demonstrate marking of acute angle, obtuse angle, splayed wall etc. • Demonstrate the checking of diagonals of a marked square/rectangle.
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	
Steel trowel, Float wooden/metal), Straight edge (Aluminium), Line and pins, Plumb bob, Line string (line Dori), Try square, Spirit level, Measuring tape, Steel or wooden scale, Tapered rule, , Red oxide, lime powder	

Module 3: Install sanitary fitting and fixtures in rural toilets

Mapped to CON/N3608 v 2.0

Terminal Outcome:

- Demonstrate cutting, bending and joining of sanitary fittings.
- Demonstrate assembling of pipes and sanitary fittings.
- Demonstrate connection of toilet fittings with soak pit.

Duration: *07:30*	**Duration**: *00:00,* **OJT:** *22:30*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Interpret sketches for plumbing and sanitation system • List various materials in sanitary system (CI/GI/PVC pipes, etc.) • List basic sanitary fittings and fixtures like (taps, valves, clamps, elbows, toilet pans, traps, etc.) • List standard size of relevant hand tools such as wrenches, plier, screwdriver, pipe cutter, pipe bender, threading tool, hacksaw, metal file, etc. and safety rules for handling and maintenance of tools • Explain process of cutting, bending and joining of fittings & fixtures • Describe transferring levels using basic levelling devices • Detail sequence of pipe installation • Explain procedure for assembling of pipe sections, tubing and fittings, using couplings, clamps, screws, bolts, caulking tools, or cutting, threading and joining equipment • Explain procedure for connection of toilet with soak pit/septic tank and inspection chamber maintaining necessary gradient as per specification • List various defects in plumbing works like leakages, improper alignment, etc. • List various tests for checking the joints and fixtures for functionality and leakage	• Demonstrate reading and understanding of the sketches of sanitary fittings and fixtures and their connection to soak pit/septic tank • Demonstrate selection of sanitary fittings and fixtures and perform checks to ensure their workability • Demonstrate checks to ensure building of toilet enclosure, bathing space, soak pits/septic tank as per drawings/sketches and necessary gradients • Demonstrate placing and fixing of concrete pre-cast rings for soak pits as per applicability • Demonstrate marking of location and position of pipe installations, connections, passage holes, and fixtures in structures, • Describe sequence of pipe installation • Demonstrate assembling of pipe sections, tubing and fittings, using couplings, clamps, screws, bolts, caulking tools, or cutting, threading and joining equipment • Demonstrate cutting of opening in structures for pipe fittings using hand tools • Demonstrate installation of pipe assemblies, fittings, and fixtures such as toilet pan using hand tools • Demonstrate checks to ensure maintenance of necessary gradient for toilet floor. • Demonstrate connection of toilet with soak pit/septic tank and inspection chamber maintaining necessary gradient as per specification • Demonstrate test for checking the joints and fixtures for functionality and leakage. • Demonstrate trial check to ensure workability of entire system prior to use.
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	
Wrenches, Plier, screwdriver, pipe cutter, pipe bender, threading tool, Hacksaw, metal file, caulking tools, cutting, threading and joining equipment	

Elective 1

Module 4: Build brick / block masonry structures for rural construction

Mapped to CON/N3602 v 2.0

Terminal Outcome:

- Perform preparatory activities for brick/block masonry work
- Demonstrate brick/block masonry work in construction of load bearing / non-load bearing wall, columns, footings and soak pits / septic tanks.
- Demonstrate pointing work for brick/block masonry.
- Demonstrate fixing of ready-to-install doors, windows and ventilators.

Duration: *15:00*	**Duration**: *00:00,* **OJT:** *45:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain basic principles of measurement, simple arithmetic's calculations and conversion of units of measurement • List masonry tools and equipment, their care and maintenance • Explain process of layout and marking for brick/block masonry • Explain selection and use tools such as measuring tape, trowels, floats, brushes, screed boards, straightedge, concrete mixer, mortar boards and stands, shovels, wheelbarrows, joint rules, mason's square, buckets, spade, etc. for masonry works • List type of raw material like cement, sand, aggregate, bricks/blocks; the size and physical attributes of bricks/blocks • Discuss visual checks performed for assessing the brick • List basic levelling instruments like spirit level and water levelling, its setting and use • Explain process of determining vertical and horizontal alignment using thread line, spirit level, plumb bob etc. • Explain 3-4-5 method for squaring corners • Explain method of carrying out checks for preparatory works like surface preparation • Describe techniques for cutting, chiselling of bricks as per closure using appropriate tools • Discuss cement mix proportion and its importance • Discuss water cement ratio • Explain various bonds and its components like English bond, Flemish bond, rat trap, stretcher and header bond • Explain process of laying and fixing brick/blocks in position with uniform joints	• Demonstrate reading and understanding of /basic working drawing for brick/block work • Demonstrate the setting out of the layout as per drawing/instruction and transferring levels as per layout • Performing visual checks for brick/block, cement, aggregate • Estimate the quantity of material required for work. • Demonstrate the breaking of bricks to required size and shape. • Build brick/block wall as per standards tolerance as per relevant drawing using English, Flemish, Stretcher, Header and Rat trap bonds. • Demonstrate checks for maintaining line and level of each course of brick/block wall • Demonstrate setting out of 90° corners using builders square or 3-4-5 method. • Demonstrate raking and cleaning of joints as specified prior to drying of bonding mortar • Demonstrate preparation of lime/cement mortar for pointing as per specification • Demonstrate filling of joints with mortar to obtain specified type of pointing using appropriate tools. • Demonstrate the marking and set out of location of frames of doors, windows and ventilators. • Demonstrate checks and carry out proper alignment of the frame • Demonstrate fixing of holdfast and grouting between frame and walls • Demonstrate fixing of panels for doors, windows and ventilators

• List different mortar mix used for pointing • Explain process of pointing in brick work: • List various types of pointing in brick/block masonry work • List various tools used for pointing and raking • Discuss various method of curing of masonry structure • List standard size of door / window, type of materials and fittings used.	
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	
Measuring tape, Trowels, Floats, Brushes, screed, boards, straightedge, hand held concrete mixer, mortar boards and stands, shovels, spade, Wheelbarrows, mason's square, spade, volume box, Plumb bob, Line string (line Dori) , Try square, Spirit level	

Module 5: Carry out IPS flooring in rural construction

Mapped to CON/N3604, v.2.0

Terminal Outcomes:

- Demonstrate preparation of sub base for IPS flooring.
- Demonstrate manual mixing of concrete.
- Demonstrate pouring and tamping of concrete.

Duration: *15:00*	**Duration**: *00:00,* **OJT:** *45:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List standard specifications of all tools and equipment required for IPS flooring • Explain the procedure for preparation of sub base by watering and ramming. • Explain procedure for marking reference level and transferrin of levels. • List various type of aggregates, type and grade of cement used and effect of water /cement ratio. • Discuss different grade of concrete • Explain procedure for manual mixing of concrete and nominal mix proportion. • Discuss sequence of concrete pouring and placing. • Explain provision of cover for reinforcement w.r.t size of reinforcement • Explain procedure for pouring concrete in alternate panels. • Explain procedure for carrying out tamping of poured concrete • Explain ways to avoid shrinkage cracks in concrete • Explain different construction and expansion joints • List different tools used for grooving/providing expansion joints • Explain procedure for final trowelling of concrete for desired finish	• Demonstrate the checks to be carried out for inspection of area prior to concreting • Ensure appropriate preparation of site. • Demonstrate checks for formwork to avoid leakage and deviation in slope and alignment in PCC • Demonstrate check to ensure proper cover for reinforcement. • Demonstrate marking and transfer of levels on floor for required thickness using appropriate tools. • Demonstrate checks to be performed for assessing the grade of cement, fine aggregate and concrete prior to use. • Demonstrate checks for assessing preparation of panels as per specified size and type. • Demonstrate fixing of glass, aluminium or brass strip in cement mortar with their tops at appropriate level and according to slope • Demonstrate pouring of concrete in alternate panels. • Demonstrate compaction and finishing of the concrete surface • Demonstrate cutting of groves for providing construction joints and expansion joints as per requirement • Demonstrate levelling of poured concrete to the specified levels maintaining required slope • Ensure curing of the finished floor.
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	
Measuring tape, Trowels, Floats, Brushes, screed, boards, straight edge, hand held concrete mixer, mortar boards and stands, shovels, spade, Wheelbarrows, mason's square, spade, volume box, Plumb bob, Line string (line Dori), Try square, Spirit level, Tamping rod, vibrators	

Module 6: Carry out reinforcement steel works for R.C.C structures in rural construction

Mapped to CON/N3605, v.2.0

Terminal Outcomes:

- Demonstrate prioritizing of work activities to achieve the desired productivity.
- Demonstrate organizing of resources as per work plan prior to commencement of work.

Duration: *22:30*	**Duration**: *00:00,* **OJT:** *37:30*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss safe working practices followed for the work along with the use of appropriate PPE's for work • Interpret different sketches for R.C.C footing, column, beam and slab • List tools and equipment for measuring, marking and cutting re-bars • Explain measurement and marking method for cutting and bending • List types of stirrups • List hand tools for cutting and bending rebar manually • List different types of cover block and their uses • List different types of steel rods, length and diameter • List different types of binding wire, thickness and uses • prevention of reinforcement from rusting • Explain use of chairs, spacer bar, hanger bars in bar bending • Discuss tolerance for cutting and bending of rebar • List different types of ties (Slash tie, ring slash tie, hair-pin tie, ring hair- pin tie, crown tie, lap tie) • Explain sequence for tying of rebar for in-situ and pre-fabricated cages for footing, column, wall, beam and slab • Explain the insertion and fixing process for slab (one way & two-way slab), beam, column, footing, wall • Explain lapping length and importance of lapping for different diameter of re-bars • Discuss importance of clear cover while carrying out reinforcement works	• Demonstrate reading of details from bar bending sketch • Calculate cutting length of re-bars , number of chairs, spacer bars from sketch • Demonstrate selection of appropriate tools for cutting and bending of re-bars • Demonstrate cutting of rebar for a smaller diameter rebar using hand tool • Demonstrate cutting of rebar using power tools • Demonstrate stacking of re-bars after cutting and bending as per standards practices • Demonstrate insertion/ fixing of rebar for footing, column, beam and slab, place and fix on its position. • Demonstrate uniformity of space in between the bars, stirrups, link rod as per the drawing/sketches • Demonstrate staggering of lap for splicing • Demonstrate making of stirrups, chairs and hanger bar • Demonstrate bending of rebar for simpler shape such as L, U shape • Demonstrate tying of rebar using different ties • Demonstrate marking, placing, fixing and tying of stirrups for column, beam as per specified spacing • Demonstrate marking, placing, fixing and tying of rebar for wall and slab as per specified spacing • Demonstrate placing of cover block and fixing of chairs for maintaining uniform thickness • Demonstrate checks to be performed for quality of reinforcement work with reference to spacing, placement, straightness of bar, rigidity of ties etc.
Classroom Aids:	

Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids
Tools, Equipment and Other Requirements
Hack saw, Rail piece, Pointed chisel, Sledge hammer, Bending lever, Pin plate, Working bench, Binding hook, Hammer, Measurement tape, M.S, TOR steel, TMT steel Binding wires, Steel cutting blade, Mechanical coupler, Cover blocks, Wooden planks, Lifting appliance (Sling, Shackle, Belts), Safety Helmet , Safety goggles,Safety shoes

Module 7: Carry out shuttering works in rural construction

Mapped to CON/N3606, v.2.0

Terminal Outcome:

- Use hand tools for making wooden shutter board
- Carry out shuttering works in rural construction for R.C.C footing, column, beam and slab
- Carry out scaffolding works using bamboo/ballies or pipes and coupler for supporting rural construction activities

Duration: *22:30*	**Duration**: *00:00,* **OJT:** *37:30*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss basic shuttering drawings/sketches • Identify different tools used for shuttering works • Explain different measuring and marking tools used for shuttering works • State the standard size of all carpentry tools, materials and components, their selection and use • Explain the importance of correct body postures • List out the safe working practices followed for the work along with the use of appropriate PPE's for work • Discuss the handling and maintenance of tools • Explain the different type of shuttering material such as timber, plywood, wooden batten, GI sheets and other material • List out the standard size of timber and plywood for shutter making purpose • Discuss the visual checks and tolerance limit for shuttering works • Describe the types of joints – Dovetail, Tenon & Mortise, Lap joints, Half joints • Explain the different types of knots used for tying bamboo, ballies • Describe the procedure for carrying out shuttering for R.C.C structures such as footing, column, wall, slab, beam etc. • Explain the dismantling procedure of shuttering for R.C.C structures such as footing, column, wall, slab, beam etc. • Discuss the procedure for erecting and dismantling staging/ scaffolding(bamboo/ballies, pipes and couplers)	• Demonstrate reading drawings/ sketches related to shuttering work • Demonstrate visual checks for timber, plywood, wooden battens, GI sheets, bamboo/ballies etc. for quality check. • Demonstrate cutting of timber and plywood as per measurement and marking • Demonstrate making of Dovetail joints, Tenon mortise joint, Lap joints, and wooden shutter panels as per shuttering works • Demonstrate positioning and fixing and of shutter board and props. • Demonstrate checks of erected formwork for line, level and alignment are within tolerance limit • Demonstrate plugging of all gaps using appropriate materials and ensure water tightness of forms • Demonstrate dismantling of shuttering for column, wall, footing, beam and slab ensuring RCC gained sufficient strength • Demonstrate repairing of formwork • Demonstrate erection and dismantle of scaffold as per requirement and stacking of scaffold material upon dismantling
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	
hand saw, different types of chisel, jack hammer, nailing hammer, hand drill, water level tube, spirit level, measuring tape, marking chalk/pencil	

Module 8: Carry out manual concreting in rural construction

Mapped to CON/N3607, v.2.0

Terminal Outcome:

- Carry out preparatory work before pouring of manual concrete
- Carry out pouring and compaction of concrete
- Finish and cure concrete

Duration: *22:30*	**Duration**: *00:00,* **OJT:** *37:30*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the standard procedure for the concreting work • List out the safe working practices for the concreting work • Discuss the standard sizes of concreting tools such as measuring tape/rule, shovels, rakes, screeding board / tools and tamping tools (hand, rolling), different types of floats, etc. and their use, upkeep and maintenance • Explain various type and grade of cement and aggregates used in concreting work. • Discuss the effect of water cement ratio on the strength and workability of the concrete. • Describe the basic properties of concrete. • Explain the nominal mixes of concrete and manual mixing procedure for concrete • Discuss the technique for spreading, floating and levelling of concrete. • Explain the use of releasing oil and its importance • Explain the importance and process of curing concrete • Discuss the common defects in concrete	• Demonstrate checks to ensure • Demonstrate checks for line, level and alignment of the formwork formwork/ reinforcement and ensure proper cover for the reinforcement. • Demonstrate visual checks for cement, aggregate, water for concrete mixing and concrete. • Demonstrate the concreting work as per the RRC structure and erected formwork. • Demonstrate the process for curing of concrete as per the standard specifications.
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	
Measuring tape, Trowels, Floats, Brushes, screed, boards, straight edge, hand held concrete mixer, mortar boards and stands, shovels, spade, Wheelbarrows, mason's square, spade, volume box, Plumb bob, Line string (line Dori), Try square, Spirit level, Tamping rod, vibrators	

Elective 2

Module 9: Select, harvest and prepare the bamboo for the construction works

Mapped to CON/N3621, v.1.0

Terminal Outcome:

- Carry out selection and harvesting of bamboo
- Perform treatment of bamboo

Duration: *15:00*	**Duration**: *00:00,* **OJT:** *45:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the basic principles of measurement. • Explain the safety rules, regulations and practises for handling and storing tools, equipment and materials required in bamboo structure construction work. • Explain the various species of bamboo used for construction works and their specifications. • Discuss the pros and cons of using bamboo as construction material. • Discuss about the harvesting of bamboo using horse foot technique • Explain various methods of bamboo treatment (with merits and demerits) such as CCB, boric and borax, alum, salt treatment and other traditional method i.e. cow urine, soaking, pressure treatment & sourcing of treatment media(chemicals), • Discuss about the Brouchery treatment plant (for in-situ treatment) and Heavy treatment plant for the bamboo members. • Explain the environment aspect related to the bamboo construction work (both negative and positive) • Describe the methods for sorting, storing and stacking of bamboo as per use. • Prepare a plan to organize work, tool and accessories for bamboo construction work.	• Identify different types and species of bamboo • Select the appropriate bamboo for the construction work based on physical description, • Demonstrate to determine the length, diameters, gaps between rings (nodes), and wall thickness (not less than 12mm) of the bamboo. • Identify recommended culm and clump for harvesting bamboo using 'horse foot technique. • Demonstrate the methods for the harvesting of bamboo without damaging their upcoming tender shoots. • Perform preparatory activity prior to the treatment of bamboo such as cleaning of culms. • Carry out different methods for the treatment of bamboo such as soaking methods, injecting method, boiling method and/ or pressure treatment • Carry out grading and storing of treated culm/ bamboo as per the specification
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	

Module10: Select, stack and perform visual quality checks on bamboo used for construction purpose

Mapped to CON/N3622, v.1.0

Terminal Outcome:

- Carry out selection, stacking and performing visual quality checks of treated bamboo for use in construction

Duration: *15:00*	**Duration**: *00:00,* **OJT:** *45:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Personal protection including the use of related safety gears & equipment. • Discuss the method of sorting, storing and stacking of bamboo as specifications. • Type of bamboo species used in construction works. • Maturity age for bamboo for use in construction works. • Pros and cons of using bamboo as construction material. • Instruction manual for bamboo treatment • Knowledge on locally available bamboo based wall construction components. • Planning and organizing of work, tool and accessories for use in bamboo construction. • Knowledge about the different steps to construction of a bamboo joint. • Check for straightness in the construction components.	• Carryout the checks to confirm the quality and specifications of bamboo as per the work requirement and standard specifications. • Select bamboo for use in different parts of a structure. • Perform the visual checks on the treated bamboo elements for the acceptable parameters as per the instruction manual • Carry out the sorting, stacking and storage of the treated bamboos members as per the standards.
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	

Module11: Cut, shape, drill and join treated bamboo for making of mat, posts, joints, ties, beams and bracing used for building construction

Mapped to CON/N3623, v.1.0

Terminal Outcome:

- Carry out cutting, shaping drilling and jointing of treated bamboo members for making of mat, posts, joints, ties, beams and bracing used for building construction

Duration: *22:30*	**Duration**: *00:00,* **OJT:** *37:30*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the methods of measurement and calculation used for making different components of building from the bamboo. • Discuss the use of tools, equipment, materials for cutting, shaping, drilling and joining of treated bamboo • Discuss about the personal protection equipment including the use of related safety gears & equipment. • Brief about the locally available bamboo and its use for building construction. • Explain the methods to produce mat, posts, joints, ties, beams and bracing from bamboo for building construction.	• Interpret the drawing relevant to bamboo construction works • Identify the different components/ members required for building construction from bamboo • Examine the treated bamboo for any signs of damage is free from damages • Demonstrate the process of cutting, shaping, drilling and joining of treated bamboo to produce different elements for construction work • Demonstration the methods to produce mat, posts, joints, ties, beams and bracing from bamboo for building construction.
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	

Module12: Construct simple rural buildings with treated bamboo

Mapped to CON/N3624, v.1.0

Terminal Outcome:

- Carry out preparatory works for construction of simple rural building.
- Carry out erection of superstructure with bamboo components.
- Carry out erection of roofing truss, purlins, ties, bracings etc.
- Fix roof cladding, CGI or bamboo sheets.

Duration: *22:30*	**Duration**: *00:00,* **OJT:** *37:30*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the methods of measurement and calculation used for construction of simple rural building using bamboo. • Discuss the use of tools, equipment, materials • Discuss about the personal protection equipment including the use of related safety gears & equipment. • Explain the different ways to tie, screw and hammer bamboo members for a permanent construction. • Describe the process of checking horizontality and vertical straightness using water level tubes, plumb bobs and other methods used for checking 90 degrees. • Explain the process of planning and organizing of work, tool and accessories for use in bamboo construction • Explain the process of erection of various components (including bamboo roof truss, cladding, sheet) of superstructure of the building constructed from bamboo.	• Interpret the sketches for the construction of building from bamboo. • Prepare the construction site and set out the layouts for the building as per sketches/drawings. • Provide the proper protection of bamboo members from moisture when in contact with ground. • Demonstrate the sorting and stacking of different components as per standards. • Demonstrate the erection of various components (including bamboo roof truss, cladding, sheet) of the superstructure of the building constructed from bamboo. • Carry out the fixing of door and window frames t0 the superstructure as per the drawing. • Carry out plastering of the bamboo mats with cement stabilised mud /cement sand mortar, or plaster reinforced with chicken wire mesh as per applicability • Carry out the fixing of ridge cap, valley & hip covers, GI gutters at eaves end for collection of rainwater.
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	

Module13: Follow seismic and wind safety protection measures for bamboo buildings

Mapped to CON/N3625, v.1.0

Terminal Outcome:

- Carry out the seismic and wind safety protection measures in bamboo building

Duration: *22:30*	**Duration**: *00:00,* **OJT:** *37:30*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss about the hazardous conditions caused due to seismic and wind force for the buildings constructed from bamboo. • Discuss the relevance of seismic and wind bracing members provided in the superstructure as per the recommended specifications • Explain the procedure and specifications for the placement of the diagonal bracing members in the roof structure • Discuss the method and relevance for winding of GI or equivalent ropes at joints to avoid stress concentration during seismic and high winds • Describe the role of J hook to avoid high wind suction of CGI sheets • Describe the role of metal arresters to avoid lifting of roofing sheets in very high wind areas	• place the seismic and wind bracing members at the specified location and as per recommended orientation in the super structure • carry out specified placement of the diagonal bracing members in the roof structure and carry out a recommended jointing • carry out winding of GI or equivalent ropes at joints to avoid stress concentration during seismic and high winds • Demonstrate the fixing of J hook to avoid high wind suction of CGI sheets • Demonstrate the fixing of metal arresters to avoid lifting of roofing sheets in very high wind areas
Classroom Aids:	
Black/White board, Projector/LED Monitor, Computer system, Trade specific charts and other teaching aids	
Tools, Equipment and Other Requirements	

Option 1

Module14: Construct buildings using Compresses Stabilized Earth Block (CSEB)

Mapped to CON/N3626, v.1.0

Terminal Outcome:

- Carry out preparatory activities for masonry work
- Carry out visual checks on CSEB and test soil types to prepare stabilized sand-mud mortar for carrying out masonry, pointing and plastering work
- Lay CSEB for construction of load bearing / non-load bearing wall, columns.
- Carry out fixing of door and window frames in CSEB masonry wall of different block sizes
- Carry out pointing in CSEB masonry of different block sizes.

Duration: *07:30*	**Duration**: *00:00,* **OJT:** *22:30*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the methods of measurement and calculation used for construction work using CSEB. • Explain the safety rules and regulations for handling and storing required tools, equipment, materials & safety gears & equipment. • List out various tools with their functions required for the construction work using CSBE. • Explain the mix of cement/lime for different soil conditions • Describe the checks on CSEB for strength, soundness, moisture absorption before use • Explain the procedure for storage of the raw materials, soil cement, lime and water • Define the procedure for laying CSEB in English and stretcher bond. • Define the procedure for construction of T, L, Crossing, opening ends in CSEB of different sizes • Explain the process of reinforcing T, L, Crossing, opening ends in CSEB in different seismic zones • Discuss about the zone specific seismic reinforcements as per drawing: Vertical reinforcement at corners and in opening jambs & horizontal bands, PB, SB, LB & RB-applicability in zone V, IV and III • Discuss the process of fixing of doors, windows and ventilators in CSEB wall • Describe the mortar used for pointing in CSEB masonry • Explain the process of pointing and curing in CSEB masonry	• Interpret the sketches for super-structure works using CSEB • select required tools for the task and ensure their working condition • Ensure work place is clear for undertaking the super-structure work • Select and secure flat areas to stack CSEB blocks. • Carry out preparation of working platform for mortar mixing • Demonstrate to lay the zero course (without mortar) of CSEB masonry as per sketches/drawings • Demonstrate methods to check the CSEB for defect such as breaking joints • Check horizontal and vertical straightness using water level tubes, plum bobs and other methods • Select and prepare/procure appropriate tools for testing of soil • Secure sources for sand, mud and water supply • select appropriate soil and sand for preparation of stabilized sand-mud mortar • Perform field tests/ laboratory tests for the CSEB/ soil to determine its quality. • Perform visual checks on the CSEB for strength, soundness, moisture absorption prior to use • estimate the quantity of CSEB and mortar material required for English and stretcher bond, full blocks, half and 3/4th blocks • Ensure proper stacking of CSEB of required numbers as per requirement at the work place

	• Demonstrate to break blocks to required shape and size using appropriate tools following appropriate safety measures • Demonstrate to lay and fix CSEB blocks for walls both load bearing and non-load bearing wall masonry for columns and walls in English (up to 1&1/2 bricks wall) and stretcher bond for different block sizes • Demonstrate to construct T, L, Crossing, opening ends in CSEB of different sizes • Provide the provisions for seismic protection • Ensure adequate curing of constructed masonry structure • Demonstrate the fixing of panels for doors, windows and ventilators to the structure • Ensure lime/cement-sand-mud mortar for pointing is prepared as per specification (10% stabilization) • Demonstrate to fill joints with cement/lime stabilized mortar (10% stabilization) to obtain specified type of pointing • Carry out flush pointing using recommended tools and technique
Classroom Aids:	
Tools, Equipment and Other Requirements	

Option 2

Module15: Build structures using random rubble masonry for rural construction

Mapped to CON/N3603, v.2.0

Terminal Outcome:

- Carry out preparatory work for rubble masonry
- Lay out coursed and un-coursed Random Rubble Masonry with undressed or hammer dressed stones
- Carry out flush /raised pointing in stone masonry

Duration: *07:30*	**Duration**: *00:00,* **OJT:** *22:30*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the methods of measurement and calculation used for construction work using rubble masonry. • Explain the safety rules and regulations for handling and storing required tools, equipment, materials & safety gears & equipment. • Discuss about the standard size of random rubble masonry tools and equipment, their use, care and maintenance • Discuss the sketches for building brick and block work structures. • Explain the standard practices for random rubble masonry work. • Describe the different types mortar requirements for the rubble masonry works as per the specification and aesthetic requirements. • Define various techniques / procedures to work with undressed and hammer dressed stones used for un-course and course random rubble masonry. • Explain the importance and purpose of using through/bond stones or their alternates. • Explain about the flushed and raised types of pointing in stone masonry and its application. • Discuss about various pointing and raking tools and method of pointing.	• Ensure that the correct tools, and tackles are selected for use in the rubble Masonry. • Select appropriate personal protective equipment (P.P.E) for the task. • Estimate amount of materials required to complete a rubble masonry work. • Ensure that the sub-base is prepared properly and surface is cleaned before laying the stone. • Identify and transfer required levels using appropriate tools prior to rubble masonry work. • Prepare the mix cement /lime/mud mortar for rubble masonry in specified ratio • Perform the checks for workability and proportion of cement/lime/ mud mortar • Prepare the sides, edges, bed of stone to ensure proper bonding of stones • Demonstrate to work with both undressed and hammer dressed stones as per the requirement. • Demonstrate to lay stones to build wall of un-course random rubble or course random rubble as per drawing/sketch. • Check horizontal and vertical alignment of the stones using appropriate tools. • Ensure proper curing of rubble masonry structure. • Ensure lime/cement mortar for pointing is prepared as per specification. • Demonstrate to fill joints with appropriate mortar to obtain specified type of pointing. • Carry out flush/raised pointing as per specification using appropriate tools and technique. • Ensure proper curing of pointing.
Classroom Aids:	

Tools, Equipment and Other Requirements
Hammer, Brick chisel, Stone chisel, Bolster , Steel trowel, Float wooden/metal), Spade (Phawda), Mortar pan (Ghamela) , Pointer trowel, Tuck pointing trowel , Line and pins, Screed board, Jointers, Plumb bob, Line string (line Dori), Try square, Spirit level, Measuring tape, Steel or wooden scale, Lifting , appliances (wheel and rope, shackles, sling, belts), Wheel barrows, Mixing plat form (3'x5'), Helmet , Face shield, Safety shoes

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	Two	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	Thre e	Civil Engineering	0	Civil Engineering	
Graduation/ Ex. Army /ITI /12th pass	General B.A./B.Sc./ Graduation certificate from Army/ITI certificate in relevant trade/12th pass	Six	Working experience as Rural mason/ supervisory work experience in masonry occupation	0	Working experience as Brick mason/ supervisory work experience in masonry occupation	

Trainer Certification	
Domain Certification	**Platform Certification**
Trainer- 80 % in each NOS of Qualification Pack "Rural Mason CON/Q3603, v1.0" 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	M. Tech in Civil/B. Tech in civil	Two	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	Five	Civil Engineering	0	Civil Engineering	
Graduation/ Ex. Army /ITI /12th pass	General B.A./B.Sc./ Graduation certificate from Army/ITI certificate in relevant trade/12th pass	Seven	Working experience as Rural mason/ supervisory work experience in masonry occupation	0	Working experience as Rural mason/ supervisory work experience in masonry occupation	

Assessor Certification	
Domain Certification	**Platform Certification**
Assessor- 80 % in each NOS of Qualification Pack "Rural Mason CON/Q3603, v1.0" 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 Body. Assessors are trained and 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 ratios for Rural Mason V1.0 (Elective: General/ Bamboo 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 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 Rural mason V1.0 (Elective: General/ Plastering) 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.

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
EHS	Environment Health and Safety
IPS	Indian Patent Stone
VDF	Vacuum Dewatering Flooring