



# Model Curriculum

**QP Name: Assistant Technician - Prestress**

**QP Code: CON/Q0801**

**Version: 3.0**

**NSQF Level: 3**

**Model Curriculum Version: 3.0**

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## Training Parameters

<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure Construction
<b>Occupation</b>	Prestressing
<b>Country</b>	India
<b>NSQF Level</b>	3
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/3123.9900
<b>Minimum Educational Qualification and Experience</b>	Grade 10 Pass OR Grade 8 pass with 2-year of (NTC/ NAC) after 8th OR 9th grade pass with 1-year relevant experience OR 8th grade pass with 2-year relevant experience OR 5th grade pass with 5-year relevant experience OR Previous relevant Qualification of NSQF Level 2 with 3-year relevant experience OR Previous relevant qualification of NSQF Level 2.5 with 1.5 relevant experience
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	31/08/2023
<b>Next Review Date</b>	29/02/2024
<b>NSQC Approval Date</b>	31/08/2023
<b>QP Version</b>	3.0
<b>Model Curriculum Creation Date</b>	31/08/2023
<b>Model Curriculum Valid Up to Date</b>	29/02/2024



<b>Model Curriculum Version</b>	3.0
<b>Minimum Duration of the Course</b>	330 Hours
<b>Maximum Duration of the Course</b>	330 Hours



## Program Overview

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

### Training Outcomes

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

- Elucidate ways to handle and store pre-stressing tools and materials.
- Explain the process of assisting in uncoiling, cutting and placing ducts and tendons.
- Describe the process of preparing grout mix and carrying out pressure grouting.
- Explain the importance of working effectively in a team to deliver desired results at the workplace.
- Explain the process of managing workplace for safe and healthy work environment.

### Compulsory Modules

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

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
<b>CON/N0801: Handle and store pre-stressing tools and materials</b> NOS Version- 3.0 NSQF Level- 3	30:00	30:00	0:00	00:00	60:00
Module 1: Introduction to the role of an Assistant Technician - Prestress	05:00	00:00	0:00	00:00	05:00
Module 2: Process of handling and storing pre-stressing tools and materials	25:00	30:00	0:00	00:00	55:00
<b>CON/N0802: Assist in uncoiling, cutting and placing ducts and tendons</b> NOS Version- 3.0 NSQF Level- 3	30:00	30:00	30:00	00:00	90:00
Module 3: Process of assisting in uncoiling, cutting and placing ducts and tendons	30:00	30:00	30:00	00:00	90:00
<b>CON/N0803: Prepare grout mix and carry out pressure grouting</b> NOS Version- 3.0	20:00	40:00	30:00	00:00	90:00



<b>NSQF Level- 3</b>					
Module 4: Process of preparing grout mix and carrying out pressure grouting	20:00	40:00	30:00	00:00	90:00
<b>CON/N8001: Work effectively in a team to deliver desired results at the workplace</b> <b>NOS Version- 12.0</b> <b>NSQF Level- 4</b>	<b>05:00</b>	<b>25:00</b>	<b>0:00</b>	<b>00:00</b>	<b>30:00</b>
Module 5: Work effectively in a team to deliver desired results at the workplace	05:00	25:00	0:00	00:00	30:00
<b>CON/N9001: Work according to personal health, safety and environment protocols at construction site</b> <b>NOS Version- 10.0</b> <b>NSQF Level- 4</b>	<b>05:00</b>	<b>25:00</b>	<b>0:00</b>	<b>00:00</b>	<b>30:00</b>
Module 6: Follow safety norms as defined by organization, adopt healthy and safe work practices	05:00	25:00	0:00	00:00	30:00
<b>DGT/VSQ/N0101: Employability Skills</b> <b>NOS Version- 1.0</b> <b>NSQF Level- 2</b>	<b>30:00</b>	<b>00:00</b>	<b>0:00</b>	<b>00:00</b>	<b>30:00</b>
Module 7: Employability Skills	30:00	00:00	0:00	00:00	30:00
<b>Total Duration</b>	<b>120:00</b>	<b>150:00</b>	<b>60:00</b>	<b>00:00</b>	<b>330:00</b>



# Module Details

## Module 1: Introduction to the role of an Assistant Technician - Prestress

Mapped to CON/N0801 v3.0

### Terminal Outcomes:

- Discuss the job role of an Assistant Technician - Prestress.

<b>Duration: 05:00</b>	<b>Duration: 0:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"><li>• Describe the size and scope of the Construction industry and its sub-sectors.</li><li>• Discuss the role and responsibilities of an Assistant Technician - Prestress.</li><li>• Identify various employment opportunities for an Assistant Technician - Prestress.</li></ul>	
<b>Classroom Aids</b>	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
<b>Tools, Equipment and Other Requirements</b>	
NA	



## Module 2: Process of handling and storing pre-stressing tools and materials

*Mapped to CON/N0801 v3.0*

### Terminal Outcomes:

- Elucidate ways to select tools and materials for pre-stressing work.
- Elucidate ways to shift, stack and store materials at the site.

<b>Duration: 25:00</b>	<b>Duration: 30:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Discuss the standard practices of pre-stressing work.</li> <li>● Explain the safety rules and regulations for handling, shifting, collecting and stacking for pre-stressing materials, tools and tackles.</li> <li>● List the components of anchorage systems, such as guides, bearing plates, grips and circlips, etc.</li> <li>● Explain the importance of personal protection including the use of the relevant safety gears and equipment the handling and maintenance of facade installation materials, tools and equipment.</li> <li>● Elucidate the concept of pre-stressing and the sequential steps involved pre-stressing.</li> <li>● List the materials used for pre-stressing works such as tendon, ducts, anchorage systems, supports, etc.</li> <li>● Explain the properties of steel tendons.</li> <li>● List the hand and power tools required for making tendon/ duct laying arrangements and their uses.</li> <li>● Explain the importance of using anchorage systems and the components used in them.</li> <li>● Explain the common types of anchorage systems, e.g. flat anchorage, blind end anchorage and their respective uses as per work requirement.</li> <li>● Explain the use of tendon ducts as per</li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrate ways to assist in shifting and stacking tendon coils at the appropriate location at the work following the applicable storage standards.</li> <li>● Demonstrate ways to assist in shifting and stacking ducts, sleeves, anchorage components, inserts and construction materials such as cement, sand, additives etc., at the specified locations as per the supervisor’s instructions.</li> <li>● Demonstrate the process of applying protective covers on the stored materials, set up appropriate signage and barricading as per the supervisor’s instructions.</li> </ul>



<p>material and dimension.</p> <ul style="list-style-type: none"> <li>● Describe the standard procedure and dos and don'ts applicable to handling of tendons and pre-stressing materials/ components.</li> <li>● Discuss the practice of storing and stacking steel tendons, pre-stressing materials/ components and tensioning jacks materials/ components.</li> <li>● State the protective arrangements/ covers to be provided to the stored materials against heat, rain or possible adverse weather conditions.</li> </ul>	
<p><b>Classroom Aids</b></p>	
<p>Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<p>Hydraulic Jack, Thermometer, Chain Pulley Arrangement, De-Coiling Setup, Spanner, Power Cutting Machine, Measuring Tape, Hydraulic Pump, Grouting Pump, Steel Scale, Stopwatch, Safety Helmets, Safety Goggles, Hand Gloves, Safety Shoes, Ear Plug, Nose Mask, Face Mask, Safety Notice Board, Cube Mould, Hydrometer, Flow Cone Apparatus, Face Shield, Overalls, Knee Pads, Safety Belts, Safety Harness, Reflective Jackets, Fire Extinguisher, Fire Prevention Kit, First Aid Box, Safety Tags.</p>	



## Module 3: Process of assisting in uncoiling, cutting and placing ducts and tendons

*Mapped to CON/N0802 v3.0*

### Terminal Outcomes:

- Explain the process of assisting in uncoiling and cutting tendons.
- Explain the process of assisting in placing ducts and tendons.

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>● Discuss the standard practices regarding uncoiling and placing tendons on the base.</li> <li>● List the visual checks to be carried out on tendons after the removal of cover.</li> <li>● State the unit weight of tendons.</li> <li>● Explain the nature of base required for placing tendons.</li> <li>● List the visual checks to be carried out to ensure the usability of tendons/ ducts for pre-stressing.</li> <li>● Explain how to form bundle by tying multiple tendons together.</li> <li>● Elucidate the necessity of providing protective wrapping to the tendons.</li> <li>● Explain how to hold tendons/ ducts safely during cutting works.</li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrate the process of preparing the bed for laying uncoiled tendons/ strands as per the supervisor's instructions.</li> <li>● Show how to remove covers from tendon coils appropriately before de-coiling.</li> <li>● Show how to check tendons and ducts for rust, moisture or deviation in shape.</li> <li>● Show how to untie or cut wires, protective systems provided with the tendon coils.</li> <li>● Show how to un-coil the tendon as per the given instructions and place them on the suitably prepared base, ensuring the base is free from soil and dust.</li> <li>● Demonstrate how to drag and position tendons on the specified base as per instruction.</li> <li>● Show how to create bundle by putting tendons of required number together.</li> <li>● Demonstrate the process of applying suitable tying to the bundle of tendons for firm binding.</li> <li>● Demonstrate the process of applying anti moisture wraps to the exposed portion of the tendons before and after placing as per the given instructions.</li> <li>● Demonstrate the process of setting up grouting nozzle and vents to the duct as per the given instruction.</li> </ul>



	<ul style="list-style-type: none"><li>● Show how to close the nozzle or open terminals of the duct by using suitable material.</li></ul>
<b>Classroom Aids</b>	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
<b>Tools, Equipment and Other Requirements</b>	
Hydraulic Jack, Thermometer, Chain Pulley Arrangement, De-Coiling Setup, Spanner, Power Cutting Machine, Measuring Tape, Hydraulic Pump, Grouting Pump, Steel Scale, Stopwatch, Safety Helmets, Safety Goggles, Hand Gloves, Safety Shoes, Ear Plug, Nose Mask, Face Mask, Safety Notice Board, Cube Mould, Hydrometer, Flow Cone Apparatus, Face Shield, Overalls, Knee Pads, Safety Belts, Safety Harness, Reflective Jackets, Fire Extinguisher, Fire Prevention Kit, First Aid Box, Safety Tags.	



## Module 4: Process of preparing grout mix and carrying out pressure grouting

Mapped to CON/N0803 v3.0

### Terminal Outcomes:

- Explain the process of preparing grout mix and grout the pre-stressing ducts.

Duration: 20:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>● List the materials to be used for the preparation of grout mix.</li> <li>● State the recommended proportion of grout materials and water for preparing grout mix.</li> <li>● Explain the use and functions of additives in grout mix.</li> <li>● Explain the use of hand/ power tools to achieve homogeneity of grout mix.</li> <li>● Explain how to operate hand grouting machine.</li> <li>● State the pressure to be applied for grouting work as per specification.</li> <li>● List the visual inspection to be performed to check the completion of grouting work.</li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrate the process of preparing the grouting mix using the appropriate tools, and obtain the required workability of the grout mix as per specification.</li> <li>● Demonstrate the process of installing the grouting pump to the provided grouting nozzles, vents and ensure adequate water tightness, as instructed.</li> <li>● Show how to fix grouting caps to the ducts, anchorages as per instructions.</li> <li>● Show how to pump grout mix to the tendon ducts by operating the grouting machine.</li> <li>● Demonstrate the process of carrying out grouting as per the given instructions at the recommended gauge pressure.</li> <li>● Demonstrate the process of performing appropriate maintenance of grouting machine and its accessories after use, such as cleaning and oiling.</li> <li>● Show how to cut grouting nozzles and vents using the appropriate cutting tools as per the supervisor's instructions.</li> </ul>
<b>Classroom Aids</b>	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
<b>Tools, Equipment and Other Requirements</b>	
Hydraulic Jack, Thermometer, Chain Pulley Arrangement, De-Coiling Setup, Spanner, Power Cutting Machine, Measuring Tape, Hydraulic Pump, Grouting Pump, Steel Scale, Stopwatch, Safety Helmets, Safety Goggles, Hand Gloves, Safety Shoes, Ear Plug, Nose Mask, Face Mask, Safety Notice Board, Cube Mould, Hydrometer, Flow Cone Apparatus, Face Shield, Overalls, Knee Pads,	



Safety Belts, Safety Harness, Reflective Jackets, Fire Extinguisher, Fire Prevention Kit, First Aid Box, Safety Tags.



## Module 5: Work effectively in a team to deliver desired results at the workplace

*Mapped to CON/N8001 v12.0*

### Terminal Outcomes:

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

<b>Duration: 05:00</b>	<b>Duration: 25:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Elucidate own roles and responsibilities.</li> <li>● Explain the importance of effective communication.</li> <li>● Elucidate the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc.</li> <li>● Explain different modes of communication used at workplace.</li> <li>● Explain the importance of creating healthy and cooperative work environment among the gangs of workers.</li> <li>● Elucidate applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement.</li> <li>● Explain the importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timeliness, safety, risks at the construction project site.</li> <li>● Explain the importance and need of supporting co-workers facing problems for the smooth functioning of work.</li> <li>● Discuss the fundamental concept of gender equality.</li> <li>● Explain how to recognise and be sensitive to issues of disability, culture and gender.</li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrate how to pass on work related information/ requirement clearly to the team members.</li> <li>● Show how to report any unresolved problem to the supervisor immediately.</li> <li>● Demonstrate ways to hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams.</li> <li>● Demonstrate ways to work together with co-workers in a synchronized manner.</li> <li>● Demonstrate effective implementation of gender neutral practices at workplace.</li> <li>● Demonstrate ways to address discriminatory and offensive behaviour in a professional manner as per organizational policy.</li> </ul>



<ul style="list-style-type: none"><li>● Discuss legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation.</li></ul>	
<b>Classroom Aids</b>	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
<b>Tools, Equipment and Other Requirements</b>	
NA	



## Module 6: Work according to personal health, safety and environment protocols at construction site

*Mapped to NOS CON/N9001 v10.0*

### Terminal Outcomes:

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

<b>Duration: 05:00</b>	<b>Duration: 25:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Describe the reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines.</li> <li>● Explain different types of safety hazards at construction sites.</li> <li>● Discuss basic ergonomic principles as per applicability.</li> <li>● Describe the procedure for responding to accidents and other emergencies at site.</li> <li>● Explain the importance of handling tools, equipment, and materials as per applicable norms.</li> <li>● Explain the effect of construction material on health and environments as per applicability.</li> <li>● Describe various environmental protection methods as per applicability.</li> <li>● Explain the storage requirement of waste including non-combustible scrap material and debris, combustible scrap material and debris, general construction waste and trash (non-toxic, non-hazardous), any other hazardous wastes and any other flammable wastes at the appropriate location.</li> <li>● Explain how to use hazardous material in a safe and appropriate manner as per applicability.</li> </ul>	<ul style="list-style-type: none"> <li>● Demonstrate how to follow emergency and evacuation procedures in case of accidents, fires, natural calamities.</li> <li>● Show how to operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline.</li> <li>● Demonstrate the use of appropriate Personal Protective Equipment (PPE) as per work requirements for: Head Protection, Ear protection, Fall Protection, Foot Protection, Face and Eye Protection, Hand and Body Protection, and Respiratory Protection (if required).</li> <li>● Demonstrate how to check and install all safety equipment as per standard guidelines.</li> <li>● Show how to collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature.</li> <li>● Show how to clean and disinfect all materials, tools and supplies before and after use.</li> </ul>





<ul style="list-style-type: none"><li>● Explain types of fire.</li><li>● Describe the procedure of operating different types of fire extinguishers.</li><li>● State safety relevant to tools, tackles, and equipment as per applicability.</li><li>● List housekeeping activities relevant to task.</li><li>● Elucidate ways of transmission of infection</li><li>● Describe different methods of cleaning, disinfection, sterilization, and sanitization.</li><li>● List the symptoms of infection like fever, cough, redness, swelling, and inflammation.</li></ul>	
<b>Classroom Aids:</b>	
Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids	
<b>Tools, Equipment and Other Requirements</b>	
Leather Hand Gloves, Jump suit, Wire brush, Hand and Leg guard leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags, Safety Notice board	



## Module 7: Employability Skills

Mapped to NOS DGT/VSQ/N0101 v1.0

**Duration: 30:00**

### Key Learning Outcomes

#### Introduction to Employability Skills Duration: 1 Hour

After completing this programme, participants will be able to:

1. Discuss the importance of Employability Skills in meeting the job requirements

#### Constitutional values - Citizenship Duration: 1 Hour

2. Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.

3. Show how to practice different environmentally sustainable practices

#### Becoming a Professional in the 21st Century Duration: 1 Hours

4. Discuss 21st century skills.

5. Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations.

#### Basic English Skills Duration: 2 Hours

6. Use appropriate basic English sentences/phrases while speaking

#### Communication Skills Duration: 4 Hour

7. Demonstrate how to communicate in a well -mannered way with others.

8. Demonstrate working with others in a team

#### Diversity & Inclusion Duration: 1 Hour

9. Show how to conduct oneself appropriately with all genders and PwD

10. Discuss the significance of reporting sexual harassment issues in time

#### Financial and Legal Literacy Duration: 4 Hours

11. Discuss the significance of using financial products and services safely and securely.

12. Explain the importance of managing expenses, income, and savings.

13. Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws

#### Essential Digital Skills Duration: 3 Hours

14. Show how to operate digital devices and use the associated applications and features, safely and securely

15. Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely

#### Entrepreneurship Duration: 7 Hours

16. Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges

#### Customer Service Duration: 4 Hours

17. Differentiate between types of customers

18. Explain the significance of identifying customer needs and addressing them

19. Discuss the significance of maintaining hygiene and dressing appropriately

#### Getting ready for apprenticeship & Jobs Duration: 2 Hours

20. Create a biodata

21. Use various sources to search and apply for jobs

22. Discuss the significance of dressing up neatly and maintaining hygiene for an interview

23. Discuss how to search and register for apprenticeship opportunities



## Module 8: On-the-Job Training

### Mapped to Assistant Technician - Prestress

<b>Mandatory Duration: 00:00</b>	<b>Recommended Duration: 30:00</b>
<b>Location: On-Site</b>	
Terminal Outcomes	
<ul style="list-style-type: none"><li>● Explain the concept of pre-stressing and the sequential steps involved pre-stressing.</li><li>● Assist in shifting and stacking tendon coils at the appropriate location at the work following the applicable storage standards.</li><li>● Assist in shifting and stacking ducts, sleeves, anchorage components, inserts and construction materials such as cement, sand, additives etc., at the specified locations as per the supervisor's instructions.</li><li>● Prepare the bed for laying uncoiled tendons/ strands as per the supervisor's instructions.</li><li>● Untie or cut wires, protective systems provided with the tendon coils.</li><li>● Set up grouting nozzle and vents to the duct as per the given instruction.</li><li>● Prepare the grouting mix using the appropriate tools, and obtain the required workability of the grout mix as per specification.</li><li>● Perform appropriate maintenance of grouting machine and its accessories after use, such as cleaning and oiling.</li></ul>	



# Annexure

## Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialisation	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
B. Tech	Civil/Mechanical/ Electrical	1	Prestressing	0	-	
Diploma	Civil/Mechanical/ Electrical	2	Prestressing	0	-	
ITI	Civil/Mechanical/ Electrical	4	Prestressing	0	-	
General BA/BSc./ EX-Army/ 12th	Civil/Mechanical/ Electrical	4	Prestressing	0	-	

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role “Assistant Technician - Prestress”, mapped to QP: “CON/Q0801, v3.0”, Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: “Trainer (Vet and Skills)”, mapped to the Qualification Pack: “MEP/Q2601, v2.0”. The minimum accepted score as per MEPSC guidelines is 80%.



## Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
B. Tech	Civil/Mechanical/ Electrical	2	Prestressing	0	-	
Diploma	Civil/Mechanical/ Electrical	4	Prestressing	0	-	
ITI	Civil/Mechanical/ Electrical	5	Prestressing	0	-	

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role “Assistant Technician - Prestress”, mapped to QP: “CON/Q0801 v3.0”, Minimum accepted score is 80%	Recommended that the Assessor is certified for the Job Role: “Assessor (VET and skills)”, mapped to the Qualification Pack: “MEP/Q2701, v2.0”. The minimum accepted score is 80%.



## Assessment Strategy

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

### 1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SIP
- The batch allocation Matrix prepared for each month based on previous months' performance of AAs, which determines the quantum of Assessment which can be allocated to each AA for a month
- Post allocation of assessment, Assessment agencies send the assessment confirmation to SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process.

### 2. Testing Environment:

- A combination of Theory and practical/demonstration test is deployed to assess knowledge and Skill respectively of Learners.
- Assessment is conducted at Training center in in-person/offline mode
- For Skill assessment, environment is simulated to create a realistic Working Environment that should replicate the key features of the workplace. In job roles, where it is difficult to replicate the same, the OJT assessment is implemented.
- During the practical task, trainees are assessed on their workmanship, quality of finished product, time management, etc., based on the performance criteria (PC), knowledge and understanding and their professional and soft skills as specified in the qualification pack.
- Knowledge assessment is done through closed ended questions up to level 4 and from level 5 onwards, it is mixture of open ended and closed ended questions

### 3. Assessment Quality Assurance levels/Framework

- Assessment criteria is developed for each QP which acts as a guide for developing question set /banks
- Sample questions aligned with Assessment criteria for each QP are developed by SSC and validated by industry
- Taking reference of Assessment criteria and Sample Questions, AAs create the question bank which is further validated by SSC
- Questions are mapped to the specified assessment criteria
- It is mandatory that Assessor and Trainer must be ToA certified & ToT Certified respectively
- Continuous Monitoring through virtual and In-person mode are conducted to ensure the assessment is conducted as per stipulated process
- Process and Technical audit of assessment batches by quality team are conducted to avoid the errors in assessment process



- A well -defined comprehensive framework of NON-COMPLIANCE MATRIX is defined and implemented to identify the non-compliance made by assessor and AA and punitive actions are taken correspondingly.
- The capacity building sessions are conducted regularly for assessors and assessment agencies to update them about best practices in assessment

#### **4. Types of evidence or evidence-gathering protocol:**

- Post Assessment, the evidences are uploaded by Assessor to assessment agency and further assessment agency to SSC as per stipulated TAT
- Evidences are broadly the photographic and video graphic in nature
- Assessment agencies upload the evidence on SIP and detailed evidence on SSC digital platform (ZoHO)
- Evidences are; NOS wise-Geotagged photographs and videos of Theory Test & Practical Tasks, Attendance sheet, result summary sheet, group photographs.

#### **5. Method of verification or validation:**

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

#### **On the Job:**

- On job training (OJT), candidates undergo training and leaning at actual workplace for a fixed period of time and a certain weightage of assessment is allocated out of total skill weightage of Qualification Pack for undergoing OJT as stipulated by CSDCI. This OJT score and assessors' end point score are combined to arrive at final Marking/grading of trainees' skill test. The OJT score is determined by Supervisor of company under which candidates undergo on job training.



## References

## Glossary

Term	Description
<b>Declarative Knowledge</b>	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.
<b>Key Learning Outcome</b>	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).
<b>OJT (M)</b>	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
<b>OJT (R)</b>	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
<b>Procedural Knowledge</b>	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.
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand and be able to do it upon the completion of the training.
<b>Terminal Outcome</b>	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