



## Qualification Pack



# Assistant Technician - Prestress

QP Code: CON/Q0801

Version: 3.0

NSQF Level: 3

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## Qualification Pack

### Contents

CON/Q0801: Assistant Technician - Prestress .....	3
<i>Brief Job Description</i> .....	3
Applicable National Occupational Standards (NOS) .....	3
<i>Compulsory NOS</i> .....	3
<i>Qualification Pack (QP) Parameters</i> .....	3
CON/N0801: Handle and store pre-stressing tools and materials .....	5
CON/N0802: Assist in uncoiling, cutting and placing ducts and tendons .....	10
CON/N0803: Prepare grout mix and carry out pressure grouting .....	15
CON/N8001: Work effectively in a team to deliver desired results at the workplace .....	19
CON/N9001: Work according to personal health, safety and environment protocols at construction site .....	23
DGT/VSQ/N0101: Employability Skills (30 Hours) .....	29
Assessment Guidelines and Weightage .....	34
<i>Assessment Guidelines</i> .....	34
<i>Assessment Weightage</i> .....	35
Acronyms .....	36
Glossary .....	37



## Qualification Pack

### CON/Q0801: Assistant Technician - Prestress

#### Brief Job Description

An Assistant Technician - Prestress is responsible for assisting in carrying out pre-stressing work in RCC structures by handling materials and tools, helping in cutting and laying of strands/ sheathing ducts, preparing grout mix and carrying out pressure grouting of ducts.

#### Personal Attributes

The individual should be physically fit with the ability to work in varying locations and environmental conditions. The person should be able to work within a team and as per the given instructions. The individual should possess basic verbal and written communication skills.

#### Applicable National Occupational Standards (NOS)

##### Compulsory NOS:

- [1. CON/N0801: Handle and store pre-stressing tools and materials](#)
- [2. CON/N0802: Assist in uncoiling, cutting and placing ducts and tendons](#)
- [3. CON/N0803: Prepare grout mix and carry out pressure grouting](#)
- [4. CON/N8001: Work effectively in a team to deliver desired results at the workplace](#)
- [5. CON/N9001: Work according to personal health, safety and environment protocols at construction site](#)
- [6. DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

#### Qualification Pack (QP) 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>Credits</b>	11



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<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/3123.9900
<b>Minimum Educational Qualification &amp; Experience</b>	10th Class OR 8th grade pass with 2 years of NTC (/ NAC after 8th) OR 9th grade pass with 1 Year of experience in the relevant field OR 8th grade pass with 2 Years of experience in the relevant field OR 5th grade pass with 5 Years of experience in the relevant field OR Previous relevant Qualification of NSQF Level (2 ) with 3 Years of experience in the relevant field OR Previous relevant Qualification of NSQF Level (2.5 with 1.5 Years of experience in the relevant field)
<b>Minimum Level of Education for Training in School</b>	10th Class
<b>Pre-Requisite License or Training</b>	NIL
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	29/02/2024
<b>NSQC Approval Date</b>	31/08/2023
<b>Version</b>	3.0
<b>Reference code on NQR</b>	QG-03-CO-00797-2023-V2-CSDCI
<b>NQR Version</b>	1



## Qualification Pack

# CON/N0801: Handle and store pre-stressing tools and materials

## Description

This unit is about handling, storing and stacking tools and construction materials at the work site for pre-stressing work.

## Scope

The scope covers the following :

- Select tools and materials for pre-stressing work
- Shift, stack and store materials at the site

## Elements and Performance Criteria

### *Select tools and materials for pre-stressing work*

To be competent, the user/individual on the job must be able to:

- PC1.** select the common hand and power tools used for pipe and tendon laying operations, such as hammer, spanner, drilling machine, circular power saw, etc., as per the work requirement
- PC2.** select the appropriate tendons for pre-stressing as per the supervisor's instruction
- PC3.** select the appropriate anchorage system, such as flat anchorage, blind end anchorage, etc.
- PC4.** select spacers and supports for placing and maintaining desired level of ducts
- PC5.** select identify blocks, inserts as applicable to the pre-stressing works
- PC6.** select common materials/components for pre-stressing work, such as cement, additives, steel tendons, tendon ducts, etc
- PC7.** ensure the selection of appropriate types of tendon ducts (sheathing) based on the material (i.e metallic or High Density Polyethylene) and size, as per the supervisor's instructions

### *Shift, stack and store materials at the site*

To be competent, the user/individual on the job must be able to:

- PC8.** assist in shifting and stacking tendon coils at the appropriate location at the work following the applicable storage standards
- PC9.** 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
- PC10.** store tensioning jacks at appropriate location as per instruction
- PC11.** apply protective covers on the stored materials, set up appropriate signage and barricading as per the supervisor's instructions

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the standard practices of pre-stressing work



## Qualification Pack

- KU2.** the safety rules and regulations for handling, shifting, collecting and stacking for pre-stressing materials, tools and tackles
- KU3.** the components of anchorage systems, such as guides, bearing plates, grips and circlips, etc
- KU4.** 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
- KU5.** the concept of pre-stressing and the sequential steps involved pre-stressing
- KU6.** the materials used for pre-stressing works such as tendon, ducts, anchorage systems, supports, etc
- KU7.** the properties of steel tendons
- KU8.** the hand and power tools required for making tendon/ duct laying arrangements and their uses
- KU9.** the importance of using anchorage systems and the components used in them
- KU10.** the common types of anchorage systems, e.g. flat anchorage, blind end anchorage and their respective uses as per work requirement
- KU11.** the use of tendon ducts as per material and dimension
- KU12.** the standard procedure and dos and don'ts applicable to handling of tendons and pre-stressing materials/ components
- KU13.** the practice of storing and stacking steel tendons, pre-stressing materials/ components and tensioning jacks materials/ components
- KU14.** the protective arrangements/ covers to be provided to the stored materials against heat, rain or possible adverse weather conditions

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain the appropriate data and records
- GS2.** read the appropriate reports and literature concerning the field of work
- GS3.** communicate professionally with all the stakeholders
- GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- GS5.** coordinate with the co-workers to achieve the work objectives
- GS6.** plan and execute tasks based on their priority
- GS7.** identify possible disruptions to work and take appropriate mitigation measures
- GS8.** take prompt action to deal with workplace emergencies and accidents
- GS9.** evaluate all possible solutions to work-related problems and select the best one
- GS10.** follow the recommended practices for the timely completion of work and achievement of organizational objectives



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### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Select tools and materials for pre-stressing work</i>	<b>15</b>	<b>30</b>	-	<b>6</b>
<b>PC1.</b> select the common hand and power tools used for pipe and tendon laying operations, such as hammer, spanner, drilling machine, circular power saw, etc., as per the work requirement	-	-	-	-
<b>PC2.</b> select the appropriate tendons for pre-stressing as per the supervisor's instruction	-	-	-	-
<b>PC3.</b> select the appropriate anchorage system, such as flat anchorage, blind end anchorage, etc.	-	-	-	-
<b>PC4.</b> select spacers and supports for placing and maintaining desired level of ducts	-	-	-	-
<b>PC5.</b> select identify blocks, inserts as applicable to the pre-stressing works	-	-	-	-
<b>PC6.</b> select common materials/components for pre-stressing work, such as cement, additives, steel tendons, tendon ducts, etc	-	-	-	-
<b>PC7.</b> ensure the selection of appropriate types of tendon ducts (sheathing) based on the material (i.e metallic or High Density Polyethylene) and size, as per the supervisor's instructions	-	-	-	-
<i>Shift, stack and store materials at the site</i>	<b>15</b>	<b>30</b>	-	<b>4</b>
<b>PC8.</b> assist in shifting and stacking tendon coils at the appropriate location at the work following the applicable storage standards	-	-	-	-
<b>PC9.</b> 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	-	-	-	-
<b>PC10.</b> store tensioning jacks at appropriate location as per instruction	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> apply protective covers on the stored materials, set up appropriate signage and barricading as per the supervisor's instructions	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>60</b>	<b>-</b>	<b>10</b>





## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0801
<b>NOS Name</b>	Handle and store pre-stressing tools and materials
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Prestressing
<b>NSQF Level</b>	3
<b>Credits</b>	2
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	31/08/2023
<b>Next Review Date</b>	29/02/2024
<b>NSQC Clearance Date</b>	31/08/2023



## Qualification Pack

# CON/N0802: Assist in uncoiling, cutting and placing ducts and tendons

## Description

This unit is about assisting in uncoiling, cutting and placing ducts and tendons.

## Scope

The scope covers the following :

- Assist in uncoiling and cutting tendons
- Assist in placing ducts and tendons

## Elements and Performance Criteria

### *Assist in uncoiling and cutting tendons*

To be competent, the user/individual on the job must be able to:

- PC1.** prepare the bed for laying uncoiled tendons/ strands as per the supervisor's instructions
- PC2.** remove covers from tendon coils appropriately before de-coiling
- PC3.** check tendons and ducts for rust, moisture or deviation in shape
- PC4.** untie or cut wires, protective systems provided with the tendon coils
- PC5.** 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
- PC6.** place roller cradles to the suitable base for dragging tendons
- PC7.** drag and position tendons on the specified base as per instruction

### *Assist in placing ducts and tendons*

To be competent, the user/individual on the job must be able to:

- PC8.** maintain the ducts/tendons firmly in position during cutting
- PC9.** create bundle by putting tendons of required number together
- PC10.** apply suitable tying to the bundle of tendons for firm binding
- PC11.** assist in placing of ducts through the marked supports as per the instructions
- PC12.** assist in pushing tendons/ bundles through the ducts
- PC13.** apply anti moisture wraps to the exposed portion of the tendons before and after placing as per the given instructions
- PC14.** set up grouting nozzle and vents to the duct as per the given instruction
- PC15.** close the nozzle or open terminals of the duct by using suitable material

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the standard practices regarding uncoiling and placing tendons on the base
- KU2.** the visual checks to be carried out on tendons after the removal of cover



## Qualification Pack

- KU3.** the unit weight of tendons
- KU4.** the nature of base required for placing tendons
- KU5.** the visual checks to be carried out to ensure the usability of tendons/ ducts for pre-stressing
- KU6.** how to form bundle by tying multiple tendons together
- KU7.** the necessity of providing protective wrapping to the tendons
- KU8.** how to hold tendons/ ducts safely during cutting works

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain the appropriate data and records
- GS2.** read the appropriate reports and literature concerning the field of work
- GS3.** communicate professionally with all the stakeholders
- GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- GS5.** coordinate with the co-workers to achieve the work objectives
- GS6.** plan and execute tasks based on their priority
- GS7.** identify possible disruptions to work and take appropriate mitigation measures
- GS8.** take prompt action to deal with workplace emergencies and accidents
- GS9.** evaluate all possible solutions to work-related problems and select the best one
- GS10.** follow the recommended practices for the timely completion of work and achievement of organizational objectives



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assist in uncoiling and cutting tendons</i>	<b>13</b>	<b>25</b>	-	<b>6</b>
<b>PC1.</b> prepare the bed for laying uncoiled tendons/ strands as per the supervisor's instructions	-	-	-	-
<b>PC2.</b> remove covers from tendon coils appropriately before de-coiling	-	-	-	-
<b>PC3.</b> check tendons and ducts for rust, moisture or deviation in shape	-	-	-	-
<b>PC4.</b> untie or cut wires, protective systems provided with the tendon coils	-	-	-	-
<b>PC5.</b> 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	-	-	-	-
<b>PC6.</b> place roller cradles to the suitable base for dragging tendons	-	-	-	-
<b>PC7.</b> drag and position tendons on the specified base as per instruction	-	-	-	-
<i>Assist in placing ducts and tendons</i>	<b>17</b>	<b>35</b>	-	<b>4</b>
<b>PC8.</b> maintain the ducts/tendons firmly in position during cutting	-	-	-	-
<b>PC9.</b> create bundle by putting tendons of required number together	-	-	-	-
<b>PC10.</b> apply suitable tying to the bundle of tendons for firm binding	-	-	-	-
<b>PC11.</b> assist in placing of ducts through the marked supports as per the instructions	-	-	-	-
<b>PC12.</b> assist in pushing tendons/ bundles through the ducts	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> apply anti moisture wraps to the exposed portion of the tendons before and after placing as per the given instructions	-	-	-	-
<b>PC14.</b> set up grouting nozzle and vents to the duct as per the given instruction	-	-	-	-
<b>PC15.</b> close the nozzle or open terminals of the duct by using suitable material	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>60</b>	-	<b>10</b>



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0802
<b>NOS Name</b>	Assist in uncoiling, cutting and placing ducts and tendons
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Prestressing
<b>NSQF Level</b>	3
<b>Credits</b>	3
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	31/08/2023
<b>Next Review Date</b>	29/02/2024
<b>NSQC Clearance Date</b>	31/08/2023



## Qualification Pack

### CON/N0803: Prepare grout mix and carry out pressure grouting

#### Description

This unit is about preparing grout mix and carrying out pressure grouting

#### Scope

The scope covers the following :

- Prepare grout mix and grout the pre-stressing ducts

#### Elements and Performance Criteria

##### *Prepare grout mix and grout the pre-stressing ducts*

To be competent, the user/individual on the job must be able to:

- PC1.** collect suitable materials, such as cement, additives and water for grouting in the mixing pan in the recommended proportion
- PC2.** prepare the grouting mix using the appropriate tools, and obtain the required workability of the grout mix as per specification
- PC3.** check the grouting pump and its accessories visually under supervision, to determine its usability
- PC4.** install the grouting pump to the provided grouting nozzles, vents and ensure adequate water tightness, as instructed
- PC5.** fix grouting caps to the ducts, anchorages as per instructions
- PC6.** pump grout mix to the tendon ducts by operating the grouting machine
- PC7.** carry out grouting as per the given instructions at the recommended gauge pressure
- PC8.** check the gauge reading to ensure the applied pressure is as per the specification
- PC9.** perform appropriate maintenance of grouting machine and its accessories after use, such as cleaning and oiling
- PC10.** cut grouting nozzles and vents using the appropriate cutting tools as per the supervisor's instructions

#### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the materials to be used for the preparation of grout mix
- KU2.** the recommended proportion of grout materials and water for preparing grout mix
- KU3.** the use and functions of additives in grout mix
- KU4.** the use of hand/ power tools to achieve homogeneity of grout mix
- KU5.** how to operate hand grouting machine
- KU6.** the pressure to be applied for grouting work as per specification
- KU7.** the visual inspection to be performed to check the completion of grouting work



## Qualification Pack

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain the appropriate data and records
- GS2.** read the appropriate reports and literature concerning the field of work
- GS3.** communicate professionally with all the stakeholders
- GS4.** listen attentively to understand the information/ instructions being shared and take appropriate action
- GS5.** coordinate with the co-workers to achieve the work objectives
- GS6.** plan and execute tasks based on their priority
- GS7.** identify possible disruptions to work and take appropriate mitigation measures
- GS8.** take prompt action to deal with workplace emergencies and accidents
- GS9.** evaluate all possible solutions to work-related problems and select the best one
- GS10.** follow the recommended practices for the timely completion of work and achievement of organizational objectives





## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare grout mix and grout the pre-stressing ducts</i>	<b>30</b>	<b>60</b>	-	<b>10</b>
<b>PC1.</b> collect suitable materials, such as cement, additives and water for grouting in the mixing pan in the recommended proportion	-	-	-	-
<b>PC2.</b> prepare the grouting mix using the appropriate tools, and obtain the required workability of the grout mix as per specification	-	-	-	-
<b>PC3.</b> check the grouting pump and its accessories visually under supervision, to determine its usability	-	-	-	-
<b>PC4.</b> install the grouting pump to the provided grouting nozzles, vents and ensure adequate water tightness, as instructed	-	-	-	-
<b>PC5.</b> fix grouting caps to the ducts, anchorages as per instructions	-	-	-	-
<b>PC6.</b> pump grout mix to the tendon ducts by operating the grouting machine	-	-	-	-
<b>PC7.</b> carry out grouting as per the given instructions at the recommended gauge pressure	-	-	-	-
<b>PC8.</b> check the gauge reading to ensure the applied pressure is as per the specification	-	-	-	-
<b>PC9.</b> perform appropriate maintenance of grouting machine and its accessories after use, such as cleaning and oiling	-	-	-	-
<b>PC10.</b> cut grouting nozzles and vents using the appropriate cutting tools as per the supervisor's instructions	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>60</b>	-	<b>10</b>



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N0803
<b>NOS Name</b>	Prepare grout mix and carry out pressure grouting
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Prestressing
<b>NSQF Level</b>	3
<b>Credits</b>	3
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	31/08/2023
<b>Next Review Date</b>	29/02/2024
<b>NSQC Clearance Date</b>	31/08/2023



## Qualification Pack

# CON/N8001: Work effectively in a team to deliver desired results at the workplace

## Description

This unit describes the skills and knowledge required to work effectively within a team to achieve the desired results

## Scope

The scope covers the following :

- Interact and communicate in an effective manner
- Support co-workers to execute the project requirements
- Practice inclusion

## Elements and Performance Criteria

### *Interact and communicate in an effective manner*

To be competent, the user/individual on the job must be able to:

- PC1.** pass on work related information/ requirement clearly to the team members
- PC2.** inform co-workers and superiors about any kind of deviations from work
- PC3.** report any unresolved problem to the supervisor immediately
- PC4.** obtain instructions from superiors and respond on the same
- PC5.** communicate to team members/subordinates for appropriate work technique and method
- PC6.** seek clarification and advice as per the requirement

### *Support co-workers to execute the project requirements*

To be competent, the user/individual on the job must be able to:

- PC7.** hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams
- PC8.** work together with co-workers in a synchronized manner

### *Practice inclusion*

To be competent, the user/individual on the job must be able to:

- PC9.** maintain cultural inclusivity at work place
- PC10.** maintain disability friendly work practices
- PC11.** follow gender neutral practices at workplace
- PC12.** address discriminatory and offensive behaviour in a professional manner as per organizational policy

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** own roles and responsibilities



## Qualification Pack

- KU2.** importance of effective communication
- KU3.** the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc.
- KU4.** different modes of communication used at workplace
- KU5.** importance of creating healthy and cooperative work environment among the gangs of workers
- KU6.** different activities within the work area where interaction with other workers is required
- KU7.** applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement
- KU8.** 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
- KU9.** importance and need of supporting co-workers facing problems for the smooth functioning of work
- KU10.** the fundamental concept of gender equality
- KU11.** how to recognise and be sensitive to issues of disability, culture and gender
- KU12.** legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read the communication regarding work completion, materials used, tools and tackles used, the resource required, etc,
- GS3.** speak in one or more languages, preferably in one of the local language of the site
- GS4.** listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes
- GS5.** communicate orally and effectively with co-workers considering their educational and social background
- GS6.** decide on what information is to be shared with co-workers within the team or to the interfacing gang of workers
- GS7.** plan work and organize the required resources in coordination with team members
- GS8.** complete all assigned task in coordination with team members
- GS9.** take initiative in resolving issues among co-workers or report the same to superiors
- GS10.** ensure best ways of coordination among team members
- GS11.** evaluate the complexity of task and determine if any guidance is required from superiors



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### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interact and communicate in an effective manner</i>	<b>18</b>	<b>42</b>	-	-
<b>PC1.</b> pass on work related information/ requirement clearly to the team members	-	-	-	-
<b>PC2.</b> inform co-workers and superiors about any kind of deviations from work	-	-	-	-
<b>PC3.</b> report any unresolved problem to the supervisor immediately	-	-	-	-
<b>PC4.</b> obtain instructions from superiors and respond on the same	-	-	-	-
<b>PC5.</b> communicate to team members/subordinates for appropriate work technique and method	-	-	-	-
<b>PC6.</b> seek clarification and advice as per the requirement	-	-	-	-
<i>Support co-workers to execute the project requirements</i>	<b>6</b>	<b>14</b>	-	-
<b>PC7.</b> hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams	-	-	-	-
<b>PC8.</b> work together with co-workers in a synchronized manner	-	-	-	-
<i>Practice inclusion</i>	<b>6</b>	<b>14</b>	-	-
<b>PC9.</b> maintain cultural inclusivity at work place	-	-	-	-
<b>PC10.</b> maintain disability friendly work practices	-	-	-	-
<b>PC11.</b> follow gender neutral practices at workplace	-	-	-	-
<b>PC12.</b> address discriminatory and offensive behaviour in a professional manner as per organizational policy	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N8001
<b>NOS Name</b>	Work effectively in a team to deliver desired results at the workplace
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Generic 2
<b>NSQF Level</b>	4
<b>Credits</b>	1
<b>Version</b>	12.0
<b>Last Reviewed Date</b>	31/08/2023
<b>Next Review Date</b>	31/08/2026
<b>NSQF Clearance Date</b>	31/08/2023



## Qualification Pack

# CON/N9001: Work according to personal health, safety and environment protocols at construction site

## Description

This NOS covers the skill and knowledge required for an individual to work according to personal health, safety and environmental protocols at construction site

## Scope

The scope covers the following :

- Follow safety norms as defined by organization
- Adopt healthy & safe work practices
- Implement good housekeeping and environment protection process and activities
- Follow infection control guidelines as per applicability

## Elements and Performance Criteria

### *Follow safety norms as defined by the organization*

To be competent, the user/individual on the job must be able to:

- PC1.** identify and report any hazards, risks or breaches in site safety to the appropriate authority
- PC2.** follow emergency and evacuation procedures in case of accidents, fires, natural calamities
- PC3.** follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable
- PC4.** follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site
- PC5.** select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline
- PC6.** identify near miss, unsafe condition and unsafe act

### *Adopt healthy & safe work practices*

To be competent, the user/individual on the job must be able to:

- PC7.** use 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)
- PC8.** handle all required tools, tackles, materials and equipment safely
- PC9.** follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines
- PC10.** check and install all safety equipment as per standard guidelines
- PC11.** follow safety protocols and practices as laid down by site EHS department
- PC12.** obtain "height pass" clearance for working at heights

### *Implement good housekeeping practices*

To be competent, the user/individual on the job must be able to:

- PC13.** collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature



## Qualification Pack

**PC14.** apply ergonomic principles wherever required

*Follow infection control guidelines as per applicability*

To be competent, the user/individual on the job must be able to:

**PC15.** follow recommended personal hygiene, workplace hygiene and sanitization practices

**PC16.** clean and disinfect all materials, tools and supplies before and after use

**PC17.** report immediately to concerned authorities regarding signs and symptoms of illness of self and others

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines
- KU2.** types of safety hazards at construction sites
- KU3.** basic ergonomic principles as per applicability
- KU4.** the procedure for responding to accidents and other emergencies at site
- KU5.** use of appropriate personal protective equipment based on various working conditions
- KU6.** importance of handling tools, equipment, and materials as per applicable norms
- KU7.** effect of construction material on health and environments as per applicability
- KU8.** various environmental protection methods as per applicability
- KU9.** storage 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
- KU10.** how to keep the workplace neat and tidy so as to be safe
- KU11.** how to use hazardous material in a safe and appropriate manner as per applicability
- KU12.** types of fire
- KU13.** procedure of operating different types of fire extinguishers
- KU14.** safety relevant to tools, tackles, and equipment as per applicability
- KU15.** housekeeping activities relevant to task
- KU16.** ways of transmission of infection
- KU17.** ways to manage infectious risks at the workplace
- KU18.** different methods of cleaning, disinfection, sterilization, and sanitization
- KU19.** symptoms of infection like fever, cough, redness, swelling, and inflammation

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** fill safety formats for near miss, unsafe conditions and safety suggestions
- GS3.** read in one or more language, preferably in the local language of the site





## Qualification Pack

- GS4.** speak in one or more language, preferably in one of the local language of the site
- GS5.** listen to instructions/communication shared by site EHS and superiors regarding site safety, and conducting the toolbox talk
- GS6.** identify potential safety risks and report to the appropriate authority
- GS7.** assess and analyze areas which may affect health, safety and environment protocol on the site



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Follow safety norms as defined by the organization</i>	<b>6</b>	<b>14</b>	-	-
<b>PC1.</b> identify and report any hazards, risks or breaches in site safety to the appropriate authority	-	-	-	-
<b>PC2.</b> follow emergency and evacuation procedures in case of accidents, fires, natural calamities	-	-	-	-
<b>PC3.</b> follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable	-	-	-	-
<b>PC4.</b> follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site	-	-	-	-
<b>PC5.</b> select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline	-	-	-	-
<b>PC6.</b> identify near miss, unsafe condition and unsafe act	-	-	-	-
<i>Adopt healthy &amp; safe work practices</i>	<b>15</b>	<b>35</b>	-	-
<b>PC7.</b> use 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)	-	-	-	-
<b>PC8.</b> handle all required tools, tackles, materials and equipment safely	-	-	-	-
<b>PC9.</b> follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	-	-	-	-
<b>PC10.</b> check and install all safety equipment as per standard guidelines	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> follow safety protocols and practices as laid down by site EHS department	-	-	-	-
<b>PC12.</b> obtain "height pass" clearance for working at heights	-	-	-	-
<i>Implement good housekeeping practices</i>	<b>6</b>	<b>14</b>	-	-
<b>PC13.</b> collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature	-	-	-	-
<b>PC14.</b> apply ergonomic principles wherever required	-	-	-	-
<i>Follow infection control guidelines as per applicability</i>	<b>3</b>	<b>7</b>	-	-
<b>PC15.</b> follow recommended personal hygiene, workplace hygiene and sanitization practices	-	-	-	-
<b>PC16.</b> clean and disinfect all materials, tools and supplies before and after use	-	-	-	-
<b>PC17.</b> report immediately to concerned authorities regarding signs and symptoms of illness of self and others	-	-	-	-
<b>NOS Total</b>	<b>30</b>	<b>70</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	CON/N9001
<b>NOS Name</b>	Work according to personal health, safety and environment protocols at construction site
<b>Sector</b>	Construction
<b>Sub-Sector</b>	Real Estate and Infrastructure construction
<b>Occupation</b>	Generic Safety
<b>NSQF Level</b>	4
<b>Credits</b>	1
<b>Version</b>	10.0
<b>Last Reviewed Date</b>	31/08/2023
<b>Next Review Date</b>	31/08/2026
<b>NSQC Clearance Date</b>	31/08/2023



## Qualification Pack

### DGT/VSQ/N0101: Employability Skills (30 Hours)

#### Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

#### Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

#### Elements and Performance Criteria

##### *Introduction to Employability Skills*

To be competent, the user/individual on the job must be able to:

**PC1.** understand the significance of employability skills in meeting the job requirements

##### *Constitutional values - Citizenship*

To be competent, the user/individual on the job must be able to:

**PC2.** identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

##### *Becoming a Professional in the 21st Century*

To be competent, the user/individual on the job must be able to:

**PC3.** explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

##### *Basic English Skills*

To be competent, the user/individual on the job must be able to:

**PC4.** speak with others using some basic English phrases or sentences

##### *Communication Skills*

To be competent, the user/individual on the job must be able to:

**PC5.** follow good manners while communicating with others

**PC6.** work with others in a team



## Qualification Pack

### *Diversity & Inclusion*

To be competent, the user/individual on the job must be able to:

**PC7.** communicate and behave appropriately with all genders and PwD

**PC8.** report any issues related to sexual harassment

### *Financial and Legal Literacy*

To be competent, the user/individual on the job must be able to:

**PC9.** use various financial products and services safely and securely

**PC10.** calculate income, expenses, savings etc.

**PC11.** approach the concerned authorities for any exploitation as per legal rights and laws

### *Essential Digital Skills*

To be competent, the user/individual on the job must be able to:

**PC12.** operate digital devices and use its features and applications securely and safely

**PC13.** use internet and social media platforms securely and safely

### *Entrepreneurship*

To be competent, the user/individual on the job must be able to:

**PC14.** identify and assess opportunities for potential business

**PC15.** identify sources for arranging money and associated financial and legal challenges

### *Customer Service*

To be competent, the user/individual on the job must be able to:

**PC16.** identify different types of customers

**PC17.** identify customer needs and address them appropriately

**PC18.** follow appropriate hygiene and grooming standards

### *Getting ready for apprenticeship & Jobs*

To be competent, the user/individual on the job must be able to:

**PC19.** create a basic biodata

**PC20.** search for suitable jobs and apply

**PC21.** identify and register apprenticeship opportunities as per requirement

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** need for employability skills

**KU2.** various constitutional and personal values

**KU3.** different environmentally sustainable practices and their importance

**KU4.** Twenty first (21st) century skills and their importance

**KU5.** how to use basic spoken English language

**KU6.** Do and dont of effective communication

**KU7.** inclusivity and its importance

**KU8.** different types of disabilities and appropriate communication and behaviour towards PwD

**KU9.** different types of financial products and services



## Qualification Pack

- KU10.** how to compute income and expenses
- KU11.** importance of maintaining safety and security in financial transactions
- KU12.** different legal rights and laws
- KU13.** how to operate digital devices and applications safely and securely
- KU14.** ways to identify business opportunities
- KU15.** types of customers and their needs
- KU16.** how to apply for a job and prepare for an interview
- KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

## Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** communicate effectively using appropriate language
- GS2.** behave politely and appropriately with all
- GS3.** perform basic calculations
- GS4.** solve problems effectively
- GS5.** be careful and attentive at work
- GS6.** use time effectively
- GS7.** maintain hygiene and sanitisation to avoid infection



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC1.</b> understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values - Citizenship</i>	<b>1</b>	<b>1</b>	-	-
<b>PC2.</b> identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	<b>1</b>	<b>3</b>	-	-
<b>PC3.</b> explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
<i>Basic English Skills</i>	<b>2</b>	<b>3</b>	-	-
<b>PC4.</b> speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC5.</b> follow good manners while communicating with others	-	-	-	-
<b>PC6.</b> work with others in a team	-	-	-	-
<i>Diversity &amp; Inclusion</i>	<b>1</b>	<b>1</b>	-	-
<b>PC7.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC8.</b> report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	<b>3</b>	<b>4</b>	-	-
<b>PC9.</b> use various financial products and services safely and securely	-	-	-	-





## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> calculate income, expenses, savings etc.	-	-	-	-
<b>PC11.</b> approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	<b>4</b>	<b>6</b>	-	-
<b>PC12.</b> operate digital devices and use its features and applications securely and safely	-	-	-	-
<b>PC13.</b> use internet and social media platforms securely and safely	-	-	-	-
<i>Entrepreneurship</i>	<b>3</b>	<b>5</b>	-	-
<b>PC14.</b> identify and assess opportunities for potential business	-	-	-	-
<b>PC15.</b> identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	<b>2</b>	<b>2</b>	-	-
<b>PC16.</b> identify different types of customers	-	-	-	-
<b>PC17.</b> identify customer needs and address them appropriately	-	-	-	-
<b>PC18.</b> follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship &amp; Jobs</i>	<b>1</b>	<b>3</b>	-	-
<b>PC19.</b> create a basic biodata	-	-	-	-
<b>PC20.</b> search for suitable jobs and apply	-	-	-	-
<b>PC21.</b> identify and register apprenticeship opportunities as per requirement	-	-	-	-
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0101
<b>NOS Name</b>	Employability Skills (30 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	2
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	27/01/2022
<b>Next Review Date</b>	26/01/2025
<b>NSQC Clearance Date</b>	27/01/2022

## Assessment Guidelines and Assessment Weightage

### Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by SSC.
3. Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below.
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.
5. The passing percentage for each QP will be 50%. To pass the Qualification Pack, every trainee should score a minimum of 50% individually in each NOS.
6. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.



## Qualification Pack

- The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
- After the certain number of iterations as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
- In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
- Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

### Minimum Aggregate Passing % at QP Level : 50

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

## Assessment Weightage

### Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N0801.Handle and store pre-stressing tools and materials	30	60	0	10	100	30
CON/N0802.Assist in uncoiling, cutting and placing ducts and tendons	30	60	0	10	100	30
CON/N0803.Prepare grout mix and carry out pressure grouting	30	60	0	10	100	25
CON/N8001.Work effectively in a team to deliver desired results at the workplace	30	70	0	0	100	5
CON/N9001.Work according to personal health, safety and environment protocols at construction site	30	70	0	0	100	5
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	5
<b>Total</b>	<b>170</b>	<b>350</b>	<b>0</b>	<b>30</b>	<b>550</b>	<b>100</b>



## Qualification Pack

### Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training
<b>MCQ</b>	Multiple Choice Question
<b>EHS</b>	Environment Health and Safety
<b>PPE</b>	Personal Protective Equipment
<b>RCC</b>	Reinforced Cement Concrete



## Qualification Pack

### Glossary

<b>Sector</b>	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.



## Qualification Pack

<b>Knowledge and Understanding (KU)</b>	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
<b>Organisational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.