



Qualification Pack



Assistant Bar Bender and Steel Fixer

QP Code: CON/Q0202

Version: 4.0

NSQF Level: 3

Construction Skill Development Council of India || CPB 103 & 104 (1st Floor), Block 4B, DLF Corporate Park, Phase III, MG Road
Gurgaon-122002 || email:neha@csdcindia.org



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CON/Q0202: Assistant Bar Bender and Steel Fixer

Brief Job Description

An Assistant Bar Bender and Steel Fixer is responsible for identification, handling and use of tools and tackles, materials and equipment for bar bending. The responsibilities also include reading and understanding reinforcement bar details from hand sketches and bar bending schedule, performing cutting, threading and manual bending of rebar and fabricating, placing and fixing of reinforcement bar at the desired location using correct ties within specified time and tolerance.

Personal Attributes

The individual should be physically fit and able to work across various locations in varying environmental conditions. The person should be able to work within a team and communicate appropriately verbally and in writing.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- [CON/N0214: Read and understand the reinforcement bar details](#)
- [CON/N0215: Use and maintain reinforcement related materials, tools and equipment](#)
- [CON/N0216: Perform cutting and manual bending of rebar in simple shapes](#)
- [CON/N0217: Assist in fabricating, placing and fixing rebar](#)
- [CON/N0101: Erect and dismantle temporary scaffold up to 3.6 meter height](#)
- [CON/N8001: Work effectively in a team to deliver desired results at the workplace](#)
- [CON/N9001: Work according to personal health, safety and environment protocols at construction site](#)
- [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Bar Bending and Fixing



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Country	India
NSQF Level	3
Credits	12
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7214.1101
Minimum Educational Qualification & Experience	10th grade pass OR 8th grade pass (with 2-year 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)
Minimum Level of Education for Training in School	5th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	31/08/2026
NSQC Approval Date	31/08/2023
Version	4.0
Reference code on NQR	QG-03-CO-00788-2023-V2-CSDCI
NQR Version	1



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CON/N0214: Read and understand the reinforcement bar details

Description

This unit is about reading and understanding reinforcement bar details from hand sketches

Scope

The scope covers the following :

- Read and understand rebar (reinforcement bars) details from hand sketches

Elements and Performance Criteria

Read and understand the rebar details

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

- PC1.** determine the diameter, cutting length, number and shape of rebar details from the relevant hand sketches
- PC2.** identify the cover for rebar from hand sketch
- PC3.** determine the spacing detail for stirrups, main and secondary rebar, bar chairs, and spacer bar
- PC4.** calculate the cutting length of rebar for simple shapes, stirrups, hanger bar and chairs

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the safety rules and regulations for handling and storing reinforcement tools, materials and components
- KU2.** the hand sketches related to reinforcement work
- KU3.** the units of measurement and conversion of linear units
- KU4.** the use of measurements and marking tools
- KU5.** different types of rebar, their grade and standard size
- KU6.** different types and thickness of binding wire
- KU7.** the methods to protect steel from rusting
- KU8.** how to perform simple arithmetic calculations
- KU9.** how to calculate the cutting length for simple shapes, stirrups, chairs etc
- KU10.** the unit weight of steel
- KU11.** the importance of scale given in drawings
- KU12.** how to make stirrups of different shapes
- KU13.** the use of stirrups, hanger bars, chairs and spacer bar
- KU14.** the covers for different types of structural elements
- KU15.** the method of inserting, placing and fixing of rebar for different structural elements



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KU16. the spacing of rebar and its importance

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.** identify possible disruptions to work and take appropriate mitigation measures
- GS7.** take prompt action to deal with workplace emergencies and accidents
- GS8.** evaluate all possible solutions to work-related problems and select the best one
- GS9.** 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>Read and understand the rebar details</i>	30	60	-	10
PC1. determine the diameter, cutting length, number and shape of rebar details from the relevant hand sketches	-	-	-	-
PC2. identify the cover for rebar from hand sketch	-	-	-	-
PC3. determine the spacing detail for stirrups, main and secondary rebar, bar chairs, and spacer bar	-	-	-	-
PC4. calculate the cutting length of rebar for simple shapes, stirrups, hanger bar and chairs	-	-	-	-
NOS Total	30	60	-	10



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0214
NOS Name	Read and understand the reinforcement bar details
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Masonry
NSQF Level	3.0
Credits	2
Version	5.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023



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CON/N0215: Use and maintain reinforcement related materials, tools and equipment

Description

This unit is about maintaining materials, tools and equipment relevant to reinforcement works under supervision

Scope

The scope covers the following :

- Use and maintain materials, tools and equipment relevant to reinforcement works

Elements and Performance Criteria

Use and maintain materials, tools and equipment relevant to reinforcement works

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

- PC1.** use different types of rebar and materials such as binding wire, bar connecting coupler, thread protection cap, as per the supervisor's instructions
- PC2.** use hand tools, such as lever, hook, measurement tape, gauge, sledge hammer, chisel, pin plate and other relevant tools for reinforcement work
- PC3.** use power tools, such as hand-held rebar cutting machine, circular rebar cutting machine and shearing machine for cutting of rebar, following the applicable safety guidelines
- PC4.** use threading machine for making threads on rebar as per the supervisor's instructions
- PC5.** use bending machine for rebar bending using different types of bushes and other accessories under supervision
- PC6.** use different types of slings, shackles and lifting belts for lifting and shifting rebars
- PC7.** use the appropriate Personal Protective Equipment (PPE), such as safety shoes, gloves, helmets, ear plugs, safety goggles, half body safety harness according to the task being undertaken
- PC8.** perform the basic maintenance of hand and power tools and coordinate with the supervisor for complex maintenance needs

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the safety rules and regulations for handling and storing reinforcement tools, materials and components
- KU2.** the importance of personal protection and use of Personal Protective Equipment (PPE)
- KU3.** safe working methods concerning bar bending and related activities
- KU4.** the use of hand tools such as lever, hook, measuring tape, sledge hammer , chisel
- KU5.** different types of binding wire
- KU6.** different types of reinforcement steel, their grade and size



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- KU7.** the use of different types of cutting and bending machine
- KU8.** the process of cutting and bending reinforcement bars using appropriate tools
- KU9.** the importance of maintaining the correct body posture during bar bending
- KU10.** the types and uses of slings, shackles and lifting belts
- KU11.** the standard procedure for stacking reinforcement bars
- KU12.** the importance of being mindful of the position of overhead electrical wires and cables during shifting / lifting of materials
- KU13.** the process of conducting visual check on the quality of different construction materials including reinforcement bars
- KU14.** the correct handling, storage and maintenance of relevant tools and equipment

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.** identify possible disruptions to work and take appropriate mitigation measures
- GS7.** take prompt action to deal with workplace emergencies and accidents
- GS8.** evaluate all possible solutions to work-related problems and select the best one
- GS9.** 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>Use and maintain materials, tools and equipment relevant to reinforcement works</i>	30	60	-	10
PC1. use different types of rebar and materials such as binding wire, bar connecting coupler, thread protection cap, as per the supervisor's instructions	-	-	-	-
PC2. use hand tools, such as lever, hook, measurement tape, gauge, sledge hammer, chisel, pin plate and other relevant tools for reinforcement work	-	-	-	-
PC3. use power tools, such as hand-held rebar cutting machine, circular rebar cutting machine and shearing machine for cutting of rebar, following the applicable safety guidelines	-	-	-	-
PC4. use threading machine for making threads on rebar as per the supervisor's instructions	-	-	-	-
PC5. use bending machine for rebar bending using different types of bushes and other accessories under supervision	-	-	-	-
PC6. use different types of slings, shackles and lifting belts for lifting and shifting rebars	-	-	-	-
PC7. use the appropriate Personal Protective Equipment (PPE), such as safety shoes, gloves, helmets, ear plugs, safety goggles, half body safety harness according to the task being undertaken	-	-	-	-
PC8. perform the basic maintenance of hand and power tools and coordinate with the supervisor for complex maintenance needs	-	-	-	-
NOS Total	30	60	-	10



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0215
NOS Name	Use and maintain reinforcement related materials, tools and equipment
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Bar Bending and Fixing
NSQF Level	3.0
Credits	2
Version	4.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQF Clearance Date	31/08/2023



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CON/N0216: Perform cutting and manual bending of rebar in simple shapes

Description

This unit is about cutting and manually bending rebar in simpler shapes as per the supervisors instructions

Scope

The scope covers the following :

- Cut and bend rebar in simple shapes

Elements and Performance Criteria

Cut and bend rebar in simple shapes

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

- PC1.** select the appropriate type of rebar as per the given instructions
- PC2.** select the appropriate hand tool or power tool for cutting rebar as per the requirement
- PC3.** measure the cutting length using a measuring tape and mark it on the rebar as per the given instruction
- PC4.** operate the selected hand or power tool safely to cut rebar, maintaining the correct body posture
- PC5.** straighten the rebar using appropriate tools before bending as required
- PC6.** create an appropriate mark on the rebar for bending, and bend the rebar using a lever or pipe of suitable diameter
- PC7.** maintain an appropriate body posture while bending rebar manually
- PC8.** create an appropriate mark on the bending bench for making stirrups, chairs, and hanger bars
- PC9.** place the rebar into a pipe of appropriate diameter, and bend bars to the required shape and angle manually as per the criteria given on the code sheets
- PC10.** check the bent rebar for the correct shape, angle and length

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the applicable housekeeping and administrative practices
- KU2.** the use of tools, such as lever, hook, chisel, sledgehammer, measuring tape, bending pipe, etc
- KU3.** the use of relevant power tools for cutting, threading and bending of rebar
- KU4.** how to calculate unit weight of steel
- KU5.** the tolerances for bending and cutting of rebar
- KU6.** the tagging procedures for rebar basis shape, size and location
- KU7.** how to carry out simple measurements using metric and imperial systems



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KU8. the calculation of cutting length for simple shape, stirrups, and chairs

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.** identify possible disruptions to work and take appropriate mitigation measures
- GS7.** take prompt action to deal with workplace emergencies and accidents
- GS8.** evaluate all possible solutions to work-related problems and select the best one
- GS9.** 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>Cut and bend rebar in simple shapes</i>	30	60	-	10
PC1. select the appropriate type of rebar as per the given instructions	-	-	-	-
PC2. select the appropriate hand tool or power tool for cutting rebar as per the requirement	-	-	-	-
PC3. measure the cutting length using a measuring tape and mark it on the rebar as per the given instruction	-	-	-	-
PC4. operate the selected hand or power tool safely to cut rebar, maintaining the correct body posture	-	-	-	-
PC5. straighten the rebar using appropriate tools before bending as required	-	-	-	-
PC6. create an appropriate mark on the rebar for bending, and bend the rebar using a lever or pipe of suitable diameter	-	-	-	-
PC7. maintain an appropriate body posture while bending rebar manually	-	-	-	-
PC8. create an appropriate mark on the bending bench for making stirrups, chairs, and hanger bars	-	-	-	-
PC9. place the rebar into a pipe of appropriate diameter, and bend bars to the required shape and angle manually as per the criteria given on the code sheets	-	-	-	-
PC10. check the bent rebar for the correct shape, angle and length	-	-	-	-
NOS Total	30	60	-	10



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0216
NOS Name	Perform cutting and manual bending of rebar in simple shapes
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Bar Bending and Fixing
NSQF Level	3.0
Credits	2
Version	4.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023



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CON/N0217: Assist in fabricating, placing and fixing rebar

Description

This unit is about fabricating, placing and fixing reinforcement for pre-fabricated and in-situ RCC structures such as columns, beams, slabs, etc

Scope

The scope covers the following :

- Fabricate, place and fix rebar

Elements and Performance Criteria

Fabricate, place and fix rebar

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

- PC1.** follow the correct method for inserting/ fixing rebar as per the types of structure, e.g. column, beam, slab and wall
- PC2.** place and fix rebar in its position as per the marking and instructions
- PC3.** maintain uniform spacing between the bars, stirrups, links as per the marking and instructions
- PC4.** stagger the lap to avoid more than recommended splicing
- PC5.** tie reinforcement with approved binding wires and use ties such as hairpin tie, ring hairpin tie, ring slash tie, crown tie as per instructions
- PC6.** position and tie cover blocks at regular intervals
- PC7.** position and fix spacer bars to maintain appropriate gap between double layer rebar as per the given instructions
- PC8.** position and fix chairs at the specified spacing to maintain correct thickness in case of slab reinforcement
- PC9.** follow the correct tying sequence for different types of pre-fabricated and in-situ rebar
- PC10.** use binding wire appropriately for tying rebar

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the sequence for tying rebar for in-situ and prefabricated cages
- KU2.** the use of chairs, spacer and hanger bars
- KU3.** the lapping length for different diameters of rebar
- KU4.** the importance of distribution rebar
- KU5.** different types of stirrups used in bar bending
- KU6.** different types of ties used in bar bending, such as slash tie, ring slash tie, hairpin tie, ring hairpin tie, crown tie, slash tie, etc



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- KU7.** the importance of clear cover while carrying out reinforcement work
- KU8.** the standard tolerance limits in reinforcement works
- KU9.** how to ensure electrical safety while using powers tools and equipment in bar bending
- KU10.** the types of rebar, their grade and standard length
- KU11.** the types and use of binding wire such as mild steel, Galvanized Iron (GI) wire
- KU12.** different types and uses of cover blocks, such as plastic and concrete

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.** identify possible disruptions to work and take appropriate mitigation measures
- GS7.** take prompt action to deal with workplace emergencies and accidents
- GS8.** evaluate all possible solutions to work-related problems and select the best one
- GS9.** 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>Fabricate, place and fix rebar</i>	30	60	-	10
PC1. follow the correct method for inserting/ fixing rebar as per the types of structure, e.g. column, beam, slab and wall	-	-	-	-
PC2. place and fix rebar in its position as per the marking and instructions	-	-	-	-
PC3. maintain uniform spacing between the bars, stirrups, links as per the marking and instructions	-	-	-	-
PC4. stagger the lap to avoid more than recommended splicing	-	-	-	-
PC5. tie reinforcement with approved binding wires and use ties such as hairpin tie, ring hairpin tie, ring slash tie, crown tie as per instructions	-	-	-	-
PC6. position and tie cover blocks at regular intervals	-	-	-	-
PC7. position and fix spacer bars to maintain appropriate gap between double layer rebar as per the given instructions	-	-	-	-
PC8. position and fix chairs at the specified spacing to maintain correct thickness in case of slab reinforcement	-	-	-	-
PC9. follow the correct tying sequence for different types of pre-fabricated and in-situ rebar	-	-	-	-
PC10. use binding wire appropriately for tying rebar	-	-	-	-
NOS Total	30	60	-	10



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0217
NOS Name	Assist in fabricating, placing and fixing rebar
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Bar Bending and Fixing
NSQF Level	3.0
Credits	1
Version	4.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023



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CON/N0101: Erect and dismantle temporary scaffold up to 3.6 meter height

Description

This unit describes the skills and knowledge required to erect and dismantle 3.6 meter temporary scaffold

Scope

The scope covers the following :

- Erect and dismantle temporary scaffold

Elements and Performance Criteria

Erect and dismantle temporary scaffold

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

- PC1.** carry out levelling in the area where scaffold needs to be erected and check for ground compactness
- PC2.** shift and stack the materials, components, tools and tackles required for erecting scaffolding, at the identified location
- PC3.** place base plates and sole boards on the ground as per the markings and given instructions
- PC4.** use appropriate components and follow the standard procedure for erecting temporary scaffold up to 3.6 m in height
- PC5.** assist in checking the verticality of scaffold at the first level of erection and take appropriate corrective measures, as required, before moving to the next level
- PC6.** assist in checking the rigidity, stability and support of erected scaffold
- PC7.** set up walk-boards, guard rails, toe-boards and other components on the scaffold's working platform
- PC8.** follow the standard procedure for dismantling the temporary scaffold, i.e. removing guard rails, toe boards, walk boards and other components sequentially
- PC9.** clean and stack all components properly after dismantling
- PC10.** follow the recommended safety measures, including the use of appropriate PPE and being careful while working on heights

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the use of different types of scaffolds (e.g. cup-lock, frame scaffold)
- KU2.** the use of tools and tackles in scaffolding, including tools for erecting and dismantling 3.6 meter temporary scaffold
- KU3.** the identification and use of different scaffolding components
- KU4.** the standard size of scaffolding components
- KU5.** the standard procedure for erecting and dismantling 3.6 m temporary scaffold



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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.** identify possible disruptions to work and take appropriate mitigation measures
- GS7.** take prompt action to deal with workplace emergencies and accidents
- GS8.** evaluate all possible solutions to work-related problems and select the best one
- GS9.** 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>Erect and dismantle temporary scaffold</i>	30	60	-	10
PC1. carry out levelling in the area where scaffold needs to be erected and check for ground compactness	-	-	-	-
PC2. shift and stack the materials, components, tools and tackles required for erecting scaffolding, at the identified location	-	-	-	-
PC3. place base plates and sole boards on the ground as per the markings and given instructions	-	-	-	-
PC4. use appropriate components and follow the standard procedure for erecting temporary scaffold up to 3.6 m in height	-	-	-	-
PC5. assist in checking the verticality of scaffold at the first level of erection and take appropriate corrective measures, as required, before moving to the next level	-	-	-	-
PC6. assist in checking the rigidity, stability and support of erected scaffold	-	-	-	-
PC7. set up walk-boards, guard rails, toe-boards and other components on the scaffold's working platform	-	-	-	-
PC8. follow the standard procedure for dismantling the temporary scaffold, i.e. removing guard rails, toe boards, walk boards and other components sequentially	-	-	-	-
PC9. clean and stack all components properly after dismantling	-	-	-	-
PC10. follow the recommended safety measures, including the use of appropriate PPE and being careful while working on heights	-	-	-	-
NOS Total	30	60	-	10



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0101
NOS Name	Erect and dismantle temporary scaffold up to 3.6 meter height
Sector	Construction
Sub-Sector	Generic
Occupation	Masonry
NSQF Level	3.0
Credits	2
Version	7.0
Last Reviewed Date	31/08/2023
Next Review Date	29/02/2024
NSQC Clearance Date	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



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- 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>	18	42	-	-
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	-	-	-	-
<i>Support co-workers to execute the project requirements</i>	6	14	-	-
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	-	-	-	-
<i>Practice inclusion</i>	6	14	-	-
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	-	-	-	-
NOS Total	30	70	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

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



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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



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- 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>	6	14	-	-
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	-	-	-	-
<i>Adopt healthy & safe work practices</i>	15	35	-	-
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	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. follow safety protocols and practices as laid down by site EHS department	-	-	-	-
PC12. obtain "height pass" clearance for working at heights	-	-	-	-
<i>Implement good housekeeping practices</i>	6	14	-	-
PC13. collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature	-	-	-	-
PC14. apply ergonomic principles wherever required	-	-	-	-
<i>Follow infection control guidelines as per applicability</i>	3	7	-	-
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	-	-	-	-
NOS Total	30	70	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

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



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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



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- 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>	1	1	-	-
PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values - Citizenship</i>	1	1	-	-
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
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.	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	1	1	-	-
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	3	4	-	-
PC9. use various financial products and services safely and securely	-	-	-	-



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



Qualification Pack

National Occupational Standards (NOS) Parameters

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



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- 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 iteration 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/N0214.Read and understand the reinforcement bar details	30	60	0	10	100	20
CON/N0215.Use and maintain reinforcement related materials, tools and equipment	30	60	0	10	100	20
CON/N0216.Perform cutting and manual bending of rebar in simple shapes	30	60	0	10	100	15
CON/N0217.Assist in fabricating, placing and fixing rebar	30	60	0	10	100	15
CON/N0101.Erect and dismantle temporary scaffold up to 3.6 meter height	30	60	0	10	100	15
CON/N8001.Work effectively in a team to deliver desired results at the workplace	30	70	0	0	100	5



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National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
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
Total	230	470	0	0	750	100



Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
EHS	Environment Health and Safety
MCQ	Multiple Choice Question
PPE	Personal Protective Equipment



Qualification Pack

Glossary

Sector	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.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	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.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	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.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	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.
Scope	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.



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Knowledge and Understanding (KU)	<p>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.</p>
Organisational Context	<p>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.</p>
Technical Knowledge	<p>Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.</p>
Core Skills/ Generic Skills (GS)	<p>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.</p>
Electives	<p>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.</p>
Options	<p>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.</p>