





# Foreman - Electrical Works (Construction)

QP Code: CON/Q0604

Version: 3.0

NSQF Level: 4.5

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# **CON/Q0604: Foreman - Electrical Works (Construction)**

#### **Brief Job Description**

A Foreman - Electrical Works (Construction) is responsible for conducting installation, repair, and maintenance of critical electrical connections/ equipment or machinery while planning and utilizing resources to meet electrical work requirements at construction sites or permanent structures.

#### **Personal Attributes**

The individual should be physically fit to work across various locations with varied environmental conditions. The person should be organized, methodical, safety-conscious, and a prompt decision-maker. The individual should have good communication skills.

#### **Applicable National Occupational Standards (NOS)**

#### **Compulsory NOS:**

- 1. <u>CON/N0611</u>: <u>Monitor regular electrical works (installation, maintenance and repairing) at a construction site</u>
- 2. <u>CON/N0612</u>: <u>Establish electrical connections during erection of plant and heavy construction machineries</u>
- 3. CON/N0613: Conduct permanent wiring and maintenance work in buildings
- 4. CON/N8001: Work effectively in a team to deliver desired results at the workplace
- 5. CON/N8002: Plan and organize work to meet expected outcomes
- 6. CON/N8003: Supervise, monitor and evaluate performance of subordinates at workplace
- 7. CON/N9002: Manage workplace for safe and healthy work environment
- 8. DGT/VSQ/N0102: Employability Skills (60 Hours)

#### **Qualification Pack (QP) Parameters**

Sector	Construction
Sub-Sector	Construction
Occupation	Construction Electrical Works
Country	India





NSQF Level	4.5
Credits	19
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7411.0301
Minimum Educational Qualification & Experience	Completed 1st year of UG (UG Certificate) OR Completed 3 year diploma after 10th OR Completed 2nd year diploma after 12th OR Completed 2nd year diploma after 12th (and pursuing continuous education) OR 12th grade Pass with 1 Year of experience relevant OR 10th grade pass with 3 Years of experience relevant OR Previous relevant Qualification of NSQF Level (3.5) with 3 Years of experience relevant OR Previous relevant Qualification of NSQF Level (4) with 1.5 years of experience relevant
Minimum Level of Education for Training in School	Not Applicable
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	30/04/2025
Deactivation Date	30/04/2025
NSQC Approval Date	31/03/2022
Version	3.0
Reference code on NQR	QG-4.5-CO-03382-2024-V1.1-CSDCI
NQR Version	3.0





# CON/N0611: Monitor regular electrical works (installation, maintenance and repairing) at a construction site

#### **Description**

This unit describes the skills and knowledge required to monitor regular electrical works (installation, maintenance and repairing) in construction sites

#### Scope

The scope covers the following:

- Monitor and check wiring / connections for LV works at a construction site.
- Conduct installation/ maintenance of construction equipment and machineries

#### **Elements and Performance Criteria**

#### Monitor and check wiring / connections for LV works at a construction site

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

- **PC1.** ensure the periodic preventive maintenance of electrical wiring, cables, equipment and fixtures deployed at construction site, under safe conditions
- PC2. ensure materials, fixtures and devices used in repairing/ maintenance works are ISI certified
- **PC3.** inspect completed LV electrical arrangements to ensure its compliance with specifications, and applicable statutory and HSE requirements
- **PC4.** ensure the safe working of lighting arrangements and its components
- **PC5.** conduct periodical checks/ tests of insulation, joints, termination of wires and cables, safety of isolation etc. to ensure safe working of wiring systems
- **PC6.** diagnose malfunctioning of wiring systems, circuits, temporary panels and its components, using appropriate measuring equipment and hand tools
- **PC7.** perform troubleshooting and take corrective actions for emergency repairs in case of short circuit or malfunction in wiring systems, temporary electrical panels or lighting arrangements

#### Conduct installation/maintenance of construction equipment and machineries

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

- **PC8.** conduct scheduled maintenance of power and diagnostic tools as per manufacturer's guidelines, to ensure their proper functioning
- **PC9.** develop hand sketches relevant to electrical circuit diagrams using standard wiring symbols as per work requirement
- **PC10.** coordinate the electrical works by providing instructions/ directions for their timely completion as per specification, guidelines and safety norms
- **PC11.** conduct periodic/scheduled calibrations of testing equipment to ensure their serviceability
- **PC12.** conduct installation, electrical maintenance and repair of equipment like electrical distribution panels and its accessories, common construction equipment like bar cutting/bending machine, different types of pumps used in construction sites, transformers and tower cranes etc.
- **PC13.** ensure safe isolation and proper termination of cables at power source and equipment





- **PC14.** prepare schedule of maintenance for common equipment and machineries such as motor, bar cutting/ bending machines, vibrators, tower cranes etc.
- **PC15.** conduct periodic checks for adverse situation like vicinity of water, fire prior, during and after establishing any electrical system
- **PC16.** ensure proper earthing of electrical circuits as per relevant specifications and manufacturer's guidelines
- **PC17.** conduct trial run and obtain clearance from respective authority relevant to electrical works prior to working of the equipment
- **PC18.** ensure upkeep of valuable electrical fixtures and perform checks at electrical stores to ensure their safe condition
- **PC19.** prepare data sheet, report and document readings as per applicability based on organizational procedures
- **PC20.** ensure electrical safety of workers, equipment, materials and fixtures by adopting standard safe working procedures at workplace as per organizational norms

#### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** standard practices for monitoring regular electrical works
- **KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials required for relevant works in accordance with organizational norms
- **KU3.** importance of personal protection including the use of related safety gears & equipment in accordance with organizational norms
- **KU4.** service request procedures for tools, materials and equipment as per organizational norms
- **KU5.** procedure for maintenance of tools and equipment
- **KU6.** guidelines provided in Indian Standard code of practices applicable for establishing and inspecting electrical wiring works
- **KU7.** statutory guidelines provided by ISI for LV wiring operations
- **KU8.** principles of electrical theory as applied to electrical circuits and wiring systems
- **KU9.** electrical safety norms as per standard practice and organizational policy
- **KU10.** drawings and SLDs related to schematics for single and three phase wiring system
- **KU11.** developing electrical drawings using appropriate symbols and abbreviations as per standard practices
- **KU12.** estimating the required material quantity from electrical drawings
- **KU13.** sequencing of electrical works to be carried out depending upon requirement of construction works
- **KU14.** acceptance criteria of electrical materials, devices, fixtures and protective arrangements
- **KU15.** how to verify authentication of ISI mark provided with electrical materials, fixtures and devices
- **KU16.** electrical isolation procedures and their applications in LV electrical works
- **KU17.** area of application, properties and specification of electrical protective devices, AC & DC circuits, electrical panels and power distribution through the same
- **KU18.** three phase connections and its distribution at construction sites
- **KU19.** procedure of troubleshooting in 3 phase connections





- **KU20.** working principle, components, troubleshooting and repair of complex electrical circuits, electrical panels, transformers, generators
- **KU21.** working principle and connection of AC single phase and AC three phase motors, submersible pumps and their maintenance
- KU22. use of starters such as DOL, Star Delta, Step down Transformer starter
- **KU23.** line and phase voltage, current and power in a 3 phase circuits with balanced and unbalanced load
- **KU24.** principle of different methods of earthing. i.e. Pipe, Plate, etc.
- **KU25.** measurement of earth resistance by earth tester, testing of earth Leakage by ELCB and relay, etc.
- **KU26.** use of electrical power tools, measuring and diagnostic tools in electrical circuits and their maintenance
- KU27. standards procedure of storing, stacking electrical tools and equipment
- **KU28.** methods and techniques of inspection that are approved by the organization
- **KU29.** calibration schedule and calibration of equipment and authorization procedures as per the organization policy
- **KU30.** quality control systems and site documentation procedures for electrical connections

#### **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 sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- **GS3.** speak in one or more language, preferably one of the local language at the site
- **GS4.** communicate orally and effectively with team members
- **GS5.** analyze the safety aspect of the workplace
- **GS6.** plan work and organize required resource effectively
- **GS7.** complete work as per agreed time schedule and quality parameters
- **GS8.** resolve any conflict within the teammates
- **GS9.** evaluate the complexity of the tasks
- **GS10.** identify any violation of safety norms during the work





#### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Monitor and check wiring / connections for LV works at a construction site	15	35	-	-
<b>PC1.</b> ensure the periodic preventive maintenance of electrical wiring, cables, equipment and fixtures deployed at construction site, under safe conditions	-	-	-	-
<b>PC2.</b> ensure materials, fixtures and devices used in repairing/ maintenance works are ISI certified	-	-	-	-
<b>PC3.</b> inspect completed LV electrical arrangements to ensure its compliance with specifications, and applicable statutory and HSE requirements	-	-	-	-
<b>PC4.</b> ensure the safe working of lighting arrangements and its components	-	-	-	-
<b>PC5.</b> conduct periodical checks/ tests of insulation, joints, termination of wires and cables, safety of isolation etc. to ensure safe working of wiring systems	-	-	-	-
<b>PC6.</b> diagnose malfunctioning of wiring systems, circuits, temporary panels and its components, using appropriate measuring equipment and hand tools	-	-	-	-
<b>PC7.</b> perform troubleshooting and take corrective actions for emergency repairs in case of short circuit or malfunction in wiring systems, temporary electrical panels or lighting arrangements	-	-	-	-
Conduct installation/maintenance of construction equipment and machineries	15	35	-	-
<b>PC8.</b> conduct scheduled maintenance of power and diagnostic tools as per manufacturer's guidelines, to ensure their proper functioning	-	-	-	-
<b>PC9.</b> develop hand sketches relevant to electrical circuit diagrams using standard wiring symbols as per work requirement	-	-	-	-
<b>PC10.</b> coordinate the electrical works by providing instructions/ directions for their timely completion as per specification, guidelines and safety norms	-	-	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> conduct periodic/scheduled calibrations of testing equipment to ensure their serviceability	-	-	-	-
<b>PC12.</b> conduct installation, electrical maintenance and repair of equipment like electrical distribution panels and its accessories, common construction equipment like bar cutting/bending machine, different types of pumps used in construction sites, transformers and tower cranes etc.	-	-	-	-
<b>PC13.</b> ensure safe isolation and proper termination of cables at power source and equipment	-	-	-	-
<b>PC14.</b> prepare schedule of maintenance for common equipment and machineries such as motor, bar cutting/ bending machines, vibrators, tower cranes etc.	-	-	-	-
<b>PC15.</b> conduct periodic checks for adverse situation like vicinity of water, fire prior, during and after establishing any electrical system	-	-	-	-
<b>PC16.</b> ensure proper earthing of electrical circuits as per relevant specifications and manufacturer's guidelines	-	-	-	-
<b>PC17.</b> conduct trial run and obtain clearance from respective authority relevant to electrical works prior to working of the equipment	-	-	-	-
<b>PC18.</b> ensure upkeep of valuable electrical fixtures and perform checks at electrical stores to ensure their safe condition	-	-	-	-
<b>PC19.</b> prepare data sheet, report and document readings as per applicability based on organizational procedures	-	-	-	-
<b>PC20.</b> ensure electrical safety of workers, equipment, materials and fixtures by adopting standard safe working procedures at workplace as per organizational norms	-	-	-	-
NOS Total	30	70	-	-





# **National Occupational Standards (NOS) Parameters**

NOS Code	CON/N0611
NOS Name	Monitor regular electrical works (installation, maintenance and repairing) at a construction site
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
NSQF Level	4.5
Credits	3
Version	3.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022





# CON/N0612: Establish electrical connections during erection of plant and heavy construction machineries

#### **Description**

This unit describes the skills and knowledge required to establish electrical connections during erection of plant and heavy construction machineries

#### Scope

The scope covers the following:

- Organize resources prior to electrification of heavy machineries
- Conduct electrification of heavy plant and machineries at construction site

#### **Elements and Performance Criteria**

#### Organize resources prior to electrification of heavy machineries

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

- **PC1.** ascertain electrical requirement of the machinery to be installed by interpreting manufacturer's guidelines
- **PC2.** estimate the material requirements from electrical drawings/ diagrams as per standard practices, and pass on the same to senior authority after validating with store
- **PC3.** perform visual inspection of available materials to ascertain their specification and physical condition
- **PC4.** coordinate with superiors for allocation of desired manpower

#### Conduct electrification of heavy plant and machineries at construction site

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

- **PC5.** provide inputs in planning and preparing work schedules for erection of heavy machineries
- **PC6.** ensure completion of preparatory works and availability of safety devices at workplace, prior to installation works
- **PC7.** inspect electrical isolation at the main and secondary power source as per safe and standard procedures
- **PC8.** inspect electrical panels and transformers to ensure conformance to manufacturer's specification, compatibility of devices, power ratings of devices etc. as per electrical safety norms
- **PC9.** erect and activate electrical panels for power source as per requirement
- **PC10.** connect machinery and power source as per requirement
- **PC11.** install earthing arrangement and protective devices at appropriate locations as per manufacturer's guidelines
- **PC12.** ensure safe joining (straight through joint) and termination of cables as per standard practices
- **PC13.** conduct trail run and electrical tests using appropriate measuring and diagnostic devices to ensure safe working of plant and machineries
- **PC14.** check panels, transformers, machineries for distribution system failure





- **PC15.** conduct preventive maintenance of electrical panels and electrical machinery parts as per requirement
- **PC16.** ensure electrical safety of workers, equipment, materials and fixtures by adopting standard safe working procedures
- **PC17.** prepare field reports and hand sketches for documentation of related works as per requirement

#### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** standard practices for establishing electrical connections during erection of plant and heavy construction machinery
- **KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials required for relevant works in accordance with organizational norms
- **KU3.** importance of personal protection including the use of related safety gears and equipment in accordance with organizational norms
- **KU4.** service request procedures for tools, materials and equipment as per organizational norms
- **KU5.** procedure for maintenance of tools and equipment
- **KU6.** statutory guidelines provided by ISI for LV wiring operations
- **KU7.** principles of electrical theory as applied to electrical circuits and wiring systems
- **KU8.** electrical safety norms as per standard practices and organizational policy
- **KU9.** drawings and SLDs related to schematics for single and three phase wiring system
- **KU10.** developing electrical drawings using appropriate symbols and abbreviations as per standard practices
- **KU11.** sequencing of electrical works to be carried out depending upon requirement of construction works
- **KU12.** estimating the required material quantity from electrical drawings
- **KU13.** acceptance criteria of electrical materials, devices, fixtures and protective arrangements
- **KU14.** how to verify authentication of ISI mark provided with electrical materials, fixtures and devices
- **KU15.** area of application and specification of electrical protective devices
- **KU16.** AC and DC circuits ,their properties and area of application
- **KU17.** Three phase connections ,its distribution and troubleshooting at construction sites
- **KU18.** complex electrical circuits including the schematics and SLDs(single line diagram)
- **KU19.** principles, components, characteristics and advanced troubleshooting of electrical panels, transformers and generators
- **KU20.** electrical isolation procedures and their applications in LV electrical works
- **KU21.** working principle and connection of AC single phase and AC three phase motors, submersible pumps and their maintenance
- **KU22.** selection and use of starters such as DOL, Star Delta, Step down transformer starter etc.
- **KU23.** line and phase voltage, current and power in a 3 phase circuits with balanced and unbalanced load
- **KU24.** principle of different methods of earthing. i.e. pipe, plate, etc.





- **KU25.** measurement of earth resistance by earth tester, testing of earth leakage by ELCB and relay, etc
- **KU26.** use of electrical power tools, measuring and diagnostic tools and their maintenance
- **KU27.** standard procedure of handling, storing and stacking of electrical tools, equipment and fixtures
- KU28. computer basics MS Office, Internet, E-mail
- KU29. basic arithmetic and use of calculator
- **KU30.** methods and techniques of inspection that are approved by the organization
- **KU31.** calibration of equipment and machineries, its schedule and authorization procedures as per the organization policy
- KU32. quality control systems and site documentation procedures for electrical connections

#### **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 sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- **GS3.** speak in one or more language, preferably one of the local language at the site
- **GS4.** communicate orally and effectively with team members
- **GS5.** analyze the safety aspect of the workplace
- **GS6.** plan work and organize required resource effectively
- **GS7.** complete work as per agreed time schedule and quality parameters
- **GS8.** resolve any conflict within the teammates
- **GS9.** evaluate the complexity of the tasks
- GS10. identify any violation of safety norms during the work





### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Organize resources prior to electrification of heavy machineries	10	25	-	-
<b>PC1.</b> ascertain electrical requirement of the machinery to be installed by interpreting manufacturer's guidelines	-	-	-	-
<b>PC2.</b> estimate the material requirements from electrical drawings/ diagrams as per standard practices, and pass on the same to senior authority after validating with store	-	-	-	-
<b>PC3.</b> perform visual inspection of available materials to ascertain their specification and physical condition	-	-	-	-
<b>PC4.</b> coordinate with superiors for allocation of desired manpower	-	-	-	-
Conduct electrification of heavy plant and machineries at construction site	20	45	-	-
<b>PC5.</b> provide inputs in planning and preparing work schedules for erection of heavy machineries	-	-	-	-
<b>PC6.</b> ensure completion of preparatory works and availability of safety devices at workplace, prior to installation works	-	-	-	-
<b>PC7.</b> inspect electrical isolation at the main and secondary power source as per safe and standard procedures	-	-	-	-
<b>PC8.</b> inspect electrical panels and transformers to ensure conformance to manufacturer's specification, compatibility of devices, power ratings of devices etc. as per electrical safety norms	-	-	-	-
<b>PC9.</b> erect and activate electrical panels for power source as per requirement	-	-	-	-
<b>PC10.</b> connect machinery and power source as per requirement	-	-	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> install earthing arrangement and protective devices at appropriate locations as per manufacturer's guidelines	-	-	-	-
<b>PC12.</b> ensure safe joining (straight through joint) and termination of cables as per standard practices	-	-	-	-
<b>PC13.</b> conduct trail run and electrical tests using appropriate measuring and diagnostic devices to ensure safe working of plant and machineries	-	-	-	-
<b>PC14.</b> check panels, transformers, machineries for distribution system failure	-	-	-	-
<b>PC15.</b> conduct preventive maintenance of electrical panels and electrical machinery parts as per requirement	-	-	-	-
<b>PC16.</b> ensure electrical safety of workers, equipment, materials and fixtures by adopting standard safe working procedures	-	-	-	-
<b>PC17.</b> prepare field reports and hand sketches for documentation of related works as per requirement	-	-	-	-
NOS Total	30	70	-	-





# **National Occupational Standards (NOS) Parameters**

NOS Code	CON/N0612
NOS Name	Establish electrical connections during erection of plant and heavy construction machineries
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
NSQF Level	4.5
Credits	4
Version	3.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022





# **CON/N0613: Conduct permanent wiring and maintenance work in buildings**

#### **Description**

This unit describes the skills and knowledge required to conduct permanent wiring and maintenance work in buildings

#### Scope

The scope covers the following:

- Calculate material requirement from drawing specifications following standard practices
- Install and maintain wiring, electrical fixtures, and equipment as per requirement /specification

#### **Elements and Performance Criteria**

Calculate material requirement from drawing specifications following standard practices

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

- **PC1.** ascertain electrical requirement for the work based on electrical drawings and guidelines
- **PC2.** estimate the materials required for electrical works as per standard practice/drawings / diagrams
- **PC3.** determine the electrical equipment and fixtures required for electrical circuits/systems from drawings as per on power rating
- **PC4.** prepare "as- built" drawing of temporary and permanent embedded electrical lines/ connections and document the same

Install and maintain wiring, electrical fixtures, and equipment as per requirement /specification

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

- **PC5.** monitor wall chasing work prior to laying conduit ,and ensure it is per standard procedures
- **PC6.** lay conduit for RCC structures and ensure it's specification are as per requirement
- **PC7.** conduct cable laying through conduit and ensure right specification of cables are being used as per electrical voltage/ load requirement
- **PC8.** conduct concealed and exposed electrical wiring work as per standard methods
- **PC9.** inspect electrical isolation at the main and secondary power source as per standard procedures
- **PC10.** fix complex electrical fixtures and installs fire alarm systems as per requirement
- **PC11.** conduct the earthing of installed electrical circuit using standard earthing components, as per standard method
- **PC12.** conduct tests/ inspections to ensure safe working of electrical circuits or to determine fault in the circuit
- **PC13.** conduct maintenance work as per requirement adhering to general electrical guidelines/specification ensuring work safety
- **PC14.** change parts, fixture, wirings as per requirement
- **PC15.** carry out basic maintenance of household equipment like water pump, motor etc





#### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** standard practices for conduct permanent wiring and maintenance work
- **KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials required for relevant works in accordance with organizational norms
- **KU3.** importance of personal protection including the use of related safety gears and equipment in accordance with organizational norms
- **KU4.** service request procedures for tools, materials and equipment as per organizational norms
- **KU5.** procedure for maintenance of tools and equipment
- **KU6.** statutory guidelines provided by ISI for LV wiring operations
- **KU7.** principles of electrical theory as applied to electrical circuits and wiring systems
- **KU8.** electrical safety norms as per standard practice and organizational policy
- **KU9.** drawings and SLDs related to schematics for single and three phase wiring system
- **KU10.** developing electrical drawings using appropriate symbols and abbreviations as per standard practices
- **KU11.** estimating the required material quantity from electrical drawings
- KU12. acceptance criteria of electrical materials, devices, fixtures and protective arrangements
- **KU13.** how to verify authentication of ISI mark provided with electrical materials, fixtures and devices
- **KU14.** properties and acceptance criteria of different components/materails used in electrical earthing work
- **KU15.** common brands and their products, and their current tentative market rate
- **KU16.** customer preferences regarding brands and trends
- **KU17.** standard practice of joining, termination and color coding of cables and wires
- **KU18.** electrical isolation procedures and their applications in LV electrical works
- **KU19.** use of circuit breakers and its replacement
- **KU20.** use of ladders, scaffolds during working/performing electrical works
- **KU21.** basic maintenance of common household equipment
- KU22. use of electrical power tools, measuring and diagnostic tools and their maintenance
- **KU23.** standard procedure of handling, storing and stacking of electrical tools, equipment and fixtures
- KU24. computer basics MS Office, Internet, E-mail
- KU25. basic arithmetic and use of calculator
- **KU26.** methods and techniques of inspection that are approved by the organization
- **KU27.** calibration of equipment and authorization procedures as per the organization policy
- **KU28.** calibration schedule of equipment and machineries
- **KU29.** quality control systems and site documentation procedures for electrical connections

#### **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 sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- **GS3.** speak in one or more language, preferably one of the local language at the site
- **GS4.** communicate orally and effectively with team members
- **GS5.** analyze the safety aspect of the workplace
- **GS6.** plan work and organize required resource effectively
- **GS7.** complete work as per agreed time schedule and quality parameters
- **GS8.** resolve any conflict within the teammates
- **GS9.** evaluate the complexity of the tasks
- **GS10.** identify any violation of safety norms during the work





#### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Calculate material requirement from drawing specifications following standard practices	15	35	-	-
<b>PC1.</b> ascertain electrical requirement for the work based on electrical drawings and guidelines	-	-	-	-
<b>PC2.</b> estimate the materials required for electrical works as per standard practice/drawings / diagrams	-	-	-	-
<b>PC3.</b> determine the electrical equipment and fixtures required for electrical circuits/systems from drawings as per on power rating	-	-	-	-
<b>PC4.</b> prepare "as- built" drawing of temporary and permanent embedded electrical lines/ connections and document the same	-	-	-	-
Install and maintain wiring, electrical fixtures, and equipment as per requirement /specification	15	35	-	-
<b>PC5.</b> monitor wall chasing work prior to laying conduit ,and ensure it is per standard procedures	-	-	-	-
<b>PC6.</b> lay conduit for RCC structures and ensure it's specification are as per requirement	-	-	-	-
<b>PC7.</b> conduct cable laying through conduit and ensure right specification of cables are being used as per electrical voltage/ load requirement	-	-	-	-
PC8. conduct concealed and exposed electrical wiring work as per standard methods	-	-	-	-
<b>PC9.</b> inspect electrical isolation at the main and secondary power source as per standard procedures	-	-	-	-
<b>PC10.</b> fix complex electrical fixtures and installs fire alarm systems as per requirement	-	-	-	-
<b>PC11.</b> conduct the earthing of installed electrical circuit using standard earthing components, as per standard method	-	-	-	-
<b>PC12.</b> conduct tests/ inspections to ensure safe working of electrical circuits or to determine fault in the circuit	-	-	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. conduct maintenance work as per requirement adhering to general electrical guidelines/specification ensuring work safety	-	-	-	-
PC14. change parts, fixture, wirings as per requirement	-	-	-	-
PC15. carry out basic maintenance of household equipment like water pump, motor etc	-	-	-	-
NOS Total	30	70	-	-





# **National Occupational Standards (NOS) Parameters**

NOS Code	CON/N0613
NOS Name	Conduct permanent wiring and maintenance work in buildings
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
NSQF Level	4.5
Credits	6
Version	3.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022





# CON/N9002: Manage workplace for safe and healthy work environment

#### **Description**

This unit describes the skill and knowledge required to maintain a healthy & safe working environment for the group of people working under an individual.

#### Scope

The scope covers the following:

- Ensure effective implementation of health, safety and environment policies and procedures
- Identify and respond to risks / fire and emergencies associated with the work practices and workplace
- Ensure sanitization and infection control guidelines are followed at construction site

#### **Elements and Performance Criteria**

Ensure effective implementation of health, safety and environment policies and procedures

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

- **PC1.** implement safe handling and stacking methods at workplace /store
- PC2. ensure the adequate availability and placing of safety and protection installations at site
- **PC3.** ensure that safe access ways are available at work place for movement of workers and materials
- **PC4.** ensure the safe use of tools and tackles by teammates as per work requirements
- **PC5.** ensure ergonomic principles are adopted by the teammates while lifting and shifting of construction materials, tools and equipment
- **PC6.** ensure appropriate use of following Personal Protective Equipment (PPE) as per work requirement of head protection, ear protection, fall protection, foot protection, face and eye protection, hand and body protection, respiratory protection
- **PC7.** maintain entry and exit pathways from confined spaces, excavated pits and other location as per safety parameters/instructions
- **PC8.** ensure proper housekeeping at workplace
- **PC9.** ensure that subordinates adhere to health and safety plans

Identify and respond to risks / fire and emergencies associated with the work practices and workplace

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

- **PC10.** identify any hazard at workplace and report/notify the same to appropriate authorities.
- **PC11.** follow procedures for accident recording and reporting as per organizational and statuary requirements
- **PC12.** ensure effective adherence to emergency response procedures / protocols
- **PC13.** select and operate different types of fire extinguishers corresponding to types of fires as per EHS guideline
- **PC14.** obtain 'height pass' clearance as per EHS guideline
- **PC15.** implement control measures to reduce risks ,meeting legislative requirements within the scope of own role and expertise, as per organizational policies

Ensure sanitization and infection control guidelines are followed at construction site





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

- **PC16.** promote awareness about latest hygiene and sanitation regulations
- **PC17.** ensure disinfection procedure related to material, tools and supplies are followed properly
- **PC18.** respond to infection prevention and control and its non-compliance, within scope of own role or report to required personnel

#### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** the policies, procedures and protocol set up by the EHS Department with respect to Health, Safety and Environment at the respective construction site
- **KU2.** reporting procedures in cases of breaches or hazards in site safety, accidents or emergency situations
- **KU3.** safe working practices for tools, tackles and equipment
- **KU4.** workplace policies and health and safety requirements for dealing with potential risks as defined by the EHS department
- **KU5.** how to respond to accidents and emergencies
- **KU6.** the appropriate personal protective equipment to be used based on various working conditions
- **KU7.** how to use necessary material ,tools, tackles and equipment in a safe and appropriate manner as specified by site EHS for each level and respective workman gang
- **KU8.** ways of transmission of infection
- **KU9.** ways to manage infectious risks at the workplace
- **KU10.** different methods of cleaning, disinfection, sterilization and sanitization
- **KU11.** symptoms of infection like fever, cough, redness, swelling and inflammation
- **KU12.** actions be taken during a medical emergency
- **KU13.** current guidelines, national legislation, local policies and protocols regarding spread of infectious disease.

#### **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 instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- GS3. speak in one or more language, preferably one of the local language at the site
- **GS4.** listen and follow instructions shared by site EHS and superiors regarding site safety
- **GS5.** communicate reporting of site conditions, hazards, accidents, etc.
- **GS6.** analyze the safety aspect of the workplace
- **GS7.** identify any violation of safety norms during the work





#### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Ensure effective implementation of health, safety and environment policies and procedures	15	40	-	-
<b>PC1.</b> implement safe handling and stacking methods at workplace /store	-	-	-	-
<b>PC2.</b> ensure the adequate availability and placing of safety and protection installations at site	-	-	-	-
<b>PC3.</b> ensure that safe access ways are available at work place for movement of workers and materials	-	-	-	-
<b>PC4.</b> ensure the safe use of tools and tackles by teammates as per work requirements	-	-	-	-
<b>PC5.</b> ensure ergonomic principles are adopted by the teammates while lifting and shifting of construction materials, tools and equipment	-	-	-	-
PC6. ensure appropriate use of following Personal Protective Equipment (PPE) as per work requirement of head protection, ear protection, fall protection, foot protection, face and eye protection, hand and body protection, respiratory protection	-	-	-	-
<b>PC7.</b> maintain entry and exit pathways from confined spaces, excavated pits and other location as per safety parameters/instructions	_	-	_	-
PC8. ensure proper housekeeping at workplace	-	-	-	-
<b>PC9.</b> ensure that subordinates adhere to health and safety plans	-	-	-	-
Identify and respond to risks / fire and emergencies associated with the work practices and workplace	10	20	-	-
<b>PC10.</b> identify any hazard at workplace and report/notify the same to appropriate authorities.	_	-	-	-
<b>PC11.</b> follow procedures for accident recording and reporting as per organizational and statuary requirements	-	-	-	-
<b>PC12.</b> ensure effective adherence to emergency response procedures / protocols	-	-	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> select and operate different types of fire extinguishers corresponding to types of fires as per EHS guideline	-	-	-	-
PC14. obtain 'height pass' clearance as per EHS guideline	-	-	-	-
<b>PC15.</b> implement control measures to reduce risks ,meeting legislative requirements within the scope of own role and expertise, as per organizational policies	-	-	-	-
Ensure sanitization and infection control guidelines are followed at construction site	5	10	-	-
<b>PC16.</b> promote awareness about latest hygiene and sanitation regulations	-	-	-	-
<b>PC17.</b> ensure disinfection procedure related to material, tools and supplies are followed properly	-	-	-	-
<b>PC18.</b> respond to infection prevention and control and its non-compliance, within scope of own role or report to required personnel	-	-	-	-
NOS Total	30	70	-	-





# **National Occupational Standards (NOS) Parameters**

NOS Code	CON/N9002
NOS Name	Manage workplace for safe and healthy work environment
Sector	Construction
Sub-Sector	Generic
Occupation	Generic Safety
NSQF Level	5
Credits	1
Version	4.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025





# **DGT/VSQ/N0102: Employability Skills (60 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
- Career Development & Goal Setting
- 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.** identify employability skills required for jobs in various industries
- **PC2.** identify and explore learning and employability portals

#### Constitutional values - Citizenship

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

- **PC3.** recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.
- **PC4.** follow environmentally sustainable practices

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

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

- **PC5.** recognize the significance of 21st Century Skills for employment
- **PC6.** practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

#### Basic English Skills

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





- **PC7.** use basic English for everyday conversation in different contexts, in person and over the telephone
- **PC8.** read and understand routine information, notes, instructions, mails, letters etc. written in English
- **PC9.** write short messages, notes, letters, e-mails etc. in English

#### Career Development & Goal Setting

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

- PC10. understand the difference between job and career
- **PC11.** prepare a career development plan with short- and long-term goals, based on aptitude *Communication Skills*

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

- **PC12.** follow verbal and non-verbal communication etiquette and active listening techniques in various settings
- **PC13.** work collaboratively with others in a team

#### Diversity & Inclusion

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

- PC14. communicate and behave appropriately with all genders and PwD
- PC15. escalate any issues related to sexual harassment at workplace according to POSH Act

#### Financial and Legal Literacy

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

- **PC16.** select financial institutions, products and services as per requirement
- **PC17.** carry out offline and online financial transactions, safely and securely
- **PC18.** identify common components of salary and compute income, expenses, taxes, investments etc
- **PC19.** identify relevant rights and laws and use legal aids to fight against legal exploitation *Essential Digital Skills*

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

- **PC20.** operate digital devices and carry out basic internet operations securely and safely
- PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively
- PC22. use basic features of word processor, spreadsheets, and presentations

#### Entrepreneurship

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

- **PC23.** identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research
- **PC24.** develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion
- **PC25.** identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

#### Customer Service

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

- **PC26.** identify different types of customers
- **PC27.** identify and respond to customer requests and needs in a professional manner.
- **PC28.** follow appropriate hygiene and grooming standards





#### Getting ready for apprenticeship & Jobs

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

- PC29. create a professional Curriculum vitae (Résumé)
- **PC30.** search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively
- **PC31.** apply to identified job openings using offline /online methods as per requirement
- PC32. answer questions politely, with clarity and confidence, during recruitment and selection
- PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements

#### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1. need for employability skills and different learning and employability related portals
- **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 English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up
- **KU6.** importance of career development and setting long- and short-term goals
- **KU7.** about effective communication
- KU8. POSH Act
- **KU9.** Gender sensitivity and inclusivity
- **KU10.** different types of financial institutes, products, and services
- **KU11.** how to compute income and expenditure
- **KU12.** importance of maintaining safety and security in offline and online financial transactions
- **KU13.** different legal rights and laws
- **KU14.** different types of digital devices and the procedure to operate them safely and securely
- **KU15.** how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.
- **KU16.** how to identify business opportunities
- **KU17.** types and needs of customers
- **KU18.** how to apply for a job and prepare for an interview
- **KU19.** apprenticeship scheme and the process of registering on apprenticeship portal

#### **Generic Skills (GS)**

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

- **GS1.** read and write different types of documents/instructions/correspondence
- **GS2.** communicate effectively using appropriate language in formal and informal settings
- **GS3.** behave politely and appropriately with all
- **GS4.** how to work in a virtual mode





**GS5.** perform calculations efficiently

**GS6.** solve problems effectively

**GS7.** pay attention to details

**GS8.** manage time efficiently

**GS9.** maintain hygiene and sanitization to avoid infection





#### **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	1	1	-	-
<b>PC1.</b> identify employability skills required for jobs in various industries	-	-	-	-
<b>PC2.</b> identify and explore learning and employability portals	-	-	-	-
Constitutional values – Citizenship	1	1	-	-
<b>PC3.</b> recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	2	4	-	-
<b>PC5.</b> recognize the significance of 21st Century Skills for employment	-	-	-	-
<b>PC6.</b> practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
Basic English Skills	2	3	-	-
<b>PC7.</b> use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
<b>PC8.</b> read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	_
<b>PC9.</b> write short messages, notes, letters, e-mails etc. in English	-	-	-	-
Career Development & Goal Setting	1	2	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> understand the difference between job and career	-	-	-	-
<b>PC11.</b> prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
Communication Skills	2	2	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	1	2	-	-
<b>PC14.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC15.</b> escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	2	3	-	-
<b>PC16.</b> select financial institutions, products and services as per requirement	-	-	-	-
<b>PC17.</b> carry out offline and online financial transactions, safely and securely	-	-	-	-
<b>PC18.</b> identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
<b>PC19.</b> identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	3	4	-	-
<b>PC20.</b> operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
<b>PC21.</b> use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
<b>PC22.</b> use basic features of word processor, spreadsheets, and presentations	-	-	-	-
Entrepreneurship	2	3	-	-





Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC23.</b> identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
<b>PC24.</b> develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
<b>PC25.</b> identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	1	2	-	-
PC26. identify different types of customers	-	-	-	-
<b>PC27.</b> identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	2	3	-	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
<b>PC30.</b> search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
<b>PC31.</b> apply to identified job openings using offline /online methods as per requirement	-	-	-	-
<b>PC32.</b> answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
<b>PC33.</b> identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	20	30	-	-





#### **National Occupational Standards (NOS) Parameters**

NOS Code	DGT/VSQ/N0102
NOS Name	Employability Skills (60 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	07/05/2028
NSQC Clearance Date	08/05/2025

# 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)/ element 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/ element.
- 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 70%. To pass the Qualification Pack, every trainee should score a minimum of 70% 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.
- 7. 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.

- 8. 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.
- 9. 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.
- 10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

#### Minimum Aggregate Passing % at QP Level: 70

(**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/N0611.Monitor regular electrical works (installation, maintenance and repairing) at a construction site	30	70	-	-	100	20
CON/N0612.Establish electrical connections during erection of plant and heavy construction machineries	30	70	-	-	100	15
CON/N0613.Conduct permanent wiring and maintenance work in buildings	30	70	-	-	100	15
CON/N8001.Work effectively in a team to deliver desired results at the workplace	30	70	-	-	100	10
CON/N8002.Plan and organize work to meet expected outcomes	30	70	-	-	100	10
CON/N8003.Supervise, monitor and evaluate performance of subordinates at workplace	30	70	0	0	100	10





National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N9002.Manage workplace for safe and healthy work environment	30	70	0	0	100	10
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	10
Total	230	520	0	0	750	100





# **Acronyms**

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
I.V.	Law Valtage
LV	Low Voltage
SLD	Single Line Diagram
STJ	Straight Through Joint
EHS	Environment, health and safety
PPE	Personal Protective Equipment
LV	Low Volatge
SLD	Single Line Diagram
ELCB	Earth-Leakage Circuit Breaker
ISI	Indian Standards Institute
RCC	Reinforced Cement Concrete
LV	Low Volatge
AC	Alternate current
DC	Direct Current
DOL Starter	Direct on line starter
LV	Low Volatge
SLD	Single Line Diagram
ELCB	Earth-leakage circuit breaker
ISI	Indian Standards Institute
RCC	reinforced cement concrete
LV	Low Volatge
SLD	Single Line Diagram





AC	Alternate current
DC	Direct Current
DOL Starter	Direct on line starter
ELCB	Earth-leakage circuit breaker
ISI	Indian Standards Institute
LV	Low Volatge
ISI	Indian Standards Institute
LV	Low Volatge
SLD	Single Line Diagram
ELCB	Earth-leakage circuit breaker
ISI	Indian Standards Institute
RCC	reinforced cement concrete
LV	Low Volatge
SLD	Single Line Diagram
AC	Alternate current
DC	Direct Current
DOL Starter	Direct on line starter
ELCB	Earth-leakage circuit breaker
ISI	Indian Standards Institute
LV	Low Volatge
ISI	Indian Standards Institute





# **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.
Knowledge and Understanding (KU)	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.





Organisational Context	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.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	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.
Electives	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.
Options	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.