









# Foreman - Electrician works (Construction)

QP Code: CON/Q0604

Version: 2.0

NSQF Level: 5

Construction Skill Development Council of India || CPB 103 & 104 (1st Floor), Block 4B, DLF Corporate

Park, Phase III, MG Road

Gurgaon-122002 || email:jancy@csdcindia.org









# **Contents**

CON/QU604: Foreman - Electrician works (Construction)	J
Brief Job Description	3
Applicable National Occupational Standards (NOS)	3
Compulsory NOS	3
Qualification Pack (QP) Parameters	3
CON/N0611: Monitor regular electrical works (installation, maintenance and repairing) at a	
construction site	5
CON/N0612: Establish electrical connections during erection of plant and heavy construction	
machineries	. 11
CON/N0613: Conduct permanent wiring and maintenance work in buildings	. 17
CON/N8001: Work effectively in a team to deliver desired results at the workplace	. 23
CON/N8002: Plan and organize work to meet expected outcomes	. 27
CON/N8003: Supervise, monitor and evaluate performance of subordinates at workplace	. 32
CON/N9002: Manage workplace for safe and healthy work environment	. 36
Assessment Guidelines and Weightage	41
Assessment Guidelines	. 41
Assessment Weightage	. 42
Acronyms	. 44
Glossary	. 45









# **CON/Q0604: Foreman - Electrician works (Construction)**

# **Brief Job Description**

This job role is responsible for conducting installation, repair, and maintenance of critical electrical connections/ equipment or machineries while planning and utilizing resources to meet electrical work requirements at construction sites or permanent structures.

#### **Personal Attributes**

The Foreman - Electrician works (Construction) is expected to be physically fit to work across various locations with varied environmental conditions. The person should be organized, diligent, methodical, safety-conscious, and a prompt decision-maker. In addition to being a team player, 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</u> machineries
- 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

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

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
Country	India









NSQF Level	5
Credits	NA
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7411.0301
Minimum Educational Qualification & Experience	10th Class + I.T.I (2 years) with 2 Years of experience in same occupation OR 12th Class with 4 Years of experience in same occupation OR Certificate-NSQF (level 4) with 2 Years of experience in same occupation
Minimum Level of Education for Training in School	Not Applicable
Pre-Requisite License or Training	NIL
Minimum Job Entry Age	18 Years
Last Reviewed On	31/03/2022
Next Review Date	31/03/2025
NSQC Approval Date	31/03/2022
Version	2.0
Reference code on NQR	2022/CON/CSDCI/05612
NQR Version	1.0









# 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.** guality 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	16	24	-	-
<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	24	36	-	-
<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	40	60	-	-









# **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	5
Credits	TBD
Version	2.0
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	12	18	-	-
<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	28	42	-	-
<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	40	60	-	-









# **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	5
Credits	TBD
Version	2.0
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	12	18	-	-
<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	28	42	-	-
<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	-	-	-	-
<b>PC8.</b> 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	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> 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	-	-	-	-
<b>PC14.</b> change parts, fixture, wirings as per requirement	-	-	-	-
<b>PC15.</b> carry out basic maintenance of household equipment like water pump, motor etc	-	-	-	-
NOS Total	40	60	-	-









# **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	5
Credits	TBD
Version	2.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022









# 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









- **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









# **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Interact and communicate in an effective manner	24	36	-	-
<b>PC1.</b> pass on work related information/ requirement clearly to the team members	-	-	-	-
<b>PC2.</b> inform co-workers and superiors about any kind of deviations from work	-	-	-	-
<b>PC3.</b> report any unresolved problem to the supervisor immediately	-	-	-	-
<b>PC4.</b> obtain instructions from superiors and respond on the same	-	-	-	-
<b>PC5.</b> communicate to team members/subordinates for appropriate work technique and method	-	-	-	-
<b>PC6.</b> seek clarification and advice as per the requirement	-	-	-	-
Support co-workers to execute the project requirements	8	12	-	-
<b>PC7.</b> 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	8	12	-	-
PC9. maintain cultural inclusivity at work place	-	-	-	-
PC10. maintain disability friendly work practices	-	-	-	-
<b>PC11.</b> follow gender neutral practices at workplace	-	-	-	-
<b>PC12.</b> address discriminatory and offensive behaviour in a professional manner as per organizational policy	-	-	-	-
NOS Total	40	60	-	•









# **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	5
Credits	TBD
Version	9.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022









# CON/N8002: Plan and organize work to meet expected outcomes

# **Description**

This unit describes the knowledge and the skills required for an individual to plan and organize own work in order to meet expected outcome

### Scope

The scope covers the following:

- Plan and prepare for work
- Organise required resources as per work plan
- Complete work as per the plan

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

#### Plan and prepare for work

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

- **PC1.** identify the targets and timelines set by superiors
- **PC2.** determine the work requirements corresponding to task(drawings/schedules/instructions/methodology), safety, tools and equipment prior to commencement of task
- **PC3.** plan the work by analyzing the required outcomes, work procedures, allotted time, resource availability and known priorities
- **PC4.** prepare the work areas in coordination with team members
- **PC5.** plan for waste collection and disposal prior to and after completion of work

#### Organise required resources as per work plan

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

- **PC6.** arrange the required manpower prior to commencement of work
- **PC7.** organize the required materials, tools and tackles required for the task

# Complete work as per the plan

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

- **PC8.** engage allocated manpower in an appropriate manner
- **PC9.** employ correct tools, tackles and equipment for the desired work
- **PC10.** provide guidance to the subordinates to obtain desired outcome
- **PC11.** use resources in an optimum manner to avoid any unnecessary wastage
- **PC12.** use tools, tackles and equipment carefully to avoid damage
- PC13. ensure the work processes adopted are in line with the specified standards and instructions
- **PC14.** complete the work with the allocated resources within specified time
- **PC15.** clean and organise the workplace after completion of task

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









The individual on the job needs to know and understand:

- **KU1.** importance of proper housekeeping including safe waste disposal
- **KU2.** policies, procedures and work targets set by superiors
- **KU3.** how to identify work activities that need to be planned and organized
- **KU4.** how to determine the task requirements
- **KU5.** how to determine the quality requirements related to the task
- **KU6.** how to undertake all aspect of planning and organizing the task, including interpretation of task, reading drawing/schedules, arranging resources, reporting problems etc.
- **KU7.** how to implement the planned activities
- **KU8.** how to use available resources in a judicious and appropriate manner to minimize wastages or damage

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

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

- **GS1.** write in one or more language, preferably the local language at the site
- **GS2.** read communication from co-workers, superiors and notices from other departments as per requirement of the level
- **GS3.** speak in one or more language, preferably one of the local language at the site
- **GS4.** follow communication shared by co-workers regarding standard work processes, resources available, timelines, etc.
- **GS5.** communicate effectively with co-workers and subordinates
- **GS6.** decide on what sequence is to be adopted for execution of work
- **GS7.** plan and organize the materials, tools, tackles and equipment required to execute the work
- **GS8.** complete all assigned task with proper planning and organizing
- **GS9.** analyze areas of work which could result in a delay of work, wastage of material or damage to tools and tackles
- **GS10.** evaluate potential solutions to minimize avoidable delays and wastages at the construction site









# **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Plan and prepare for work	12	18	-	-
<b>PC1.</b> identify the targets and timelines set by superiors	-	-	-	-
<b>PC2.</b> determine the work requirements corresponding to task(drawings/schedules/instructions/methodology), safety, tools and equipment prior to commencement of task	-	-	-	-
<b>PC3.</b> plan the work by analyzing the required outcomes, work procedures, allotted time, resource availability and known priorities	-	-	-	-
<b>PC4.</b> prepare the work areas in coordination with team members	-	-	-	-
<b>PC5.</b> plan for waste collection and disposal prior to and after completion of work	-	-	-	-
Organise required resources as per work plan	8	12	-	-
<b>PC6.</b> arrange the required manpower prior to commencement of work	-	-	-	-
<b>PC7.</b> organize the required materials, tools and tackles required for the task	-	-	-	-
Complete work as per the plan	20	30	-	-
<b>PC8.</b> engage allocated manpower in an appropriate manner	-	-	-	-
<b>PC9.</b> employ correct tools, tackles and equipment for the desired work	-	-	-	-
<b>PC10.</b> provide guidance to the subordinates to obtain desired outcome	-	-	-	-
<b>PC11.</b> use resources in an optimum manner to avoid any unnecessary wastage	-	-	-	-
<b>PC12.</b> use tools, tackles and equipment carefully to avoid damage	-	-	-	-
<b>PC13.</b> ensure the work processes adopted are in line with the specified standards and instructions	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> complete the work with the allocated resources within specified time	-	-	-	-
<b>PC15.</b> clean and organise the workplace after completion of task	-	-	-	-
NOS Total	40	60	-	-









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

NOS Code	CON/N8002
NOS Name	Plan and organize work to meet expected outcomes
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic 2
NSQF Level	4
Credits	TBD
Version	6.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022









# CON/N8003: Supervise, monitor and evaluate performance of subordinates at workplace

# **Description**

This unit covers the skills and knowledge required by an individual to supervise, monitor and evaluate performance of subordinates at the work place

# Scope

The scope covers the following:

- Monitor and evaluate subordinates performance as per quality standards and timelines
- Practice and promote gender inclusive behavior and leadership

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

#### Monitor and evaluate subordinates performance as per quality standards and timelines

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

- **PC1.** fix expected targets for the respective gang as per site requirements and allocate work to subordinates
- **PC2.** establish expected performance standards and expectations for the respective gang of workers to meet the desired outcomes
- **PC3.** inspect assigned work to the respected gang of workers through progressive checking
- **PC4.** observe and verify the work activities performed by the subordinates at the construction site
- **PC5.** monitor overall performance of subordinates on the designed measures to ensure quality requirements set by the concerned authority
- **PC6.** ensure adherence to the organizational policies and procedures for all relevant construction activities by the workmen subordinations

#### Practice and promote gender inclusive behavior and leadership

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

- **PC7.** promote a safe, supportive, inclusive and gender sensitive environment at workplace.
- PC8. manage and facilitate capacity building to enable inclusion of all genders
- **PC9.** take prompt corrective action in case of inappropriate behavior at workplace

# **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- **KU1.** policies, procedures and work targets for performance evaluation and appraisals
- **KU2.** organizational policies, procedures and protocol for smooth completion of work at the respective workplace
- **KU3.** complete work/task accurately by following standard specifications and procedures by optimized and correct used of materials , tools, tackles and equipment









# **Generic Skills (GS)**

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

- **GS1.** write in at one or more language, preferably the local language
- GS2. read in at one or more language, preferably the local language at the site
- GS3. speak in at one or more language, preferably one of the local language at the site
- **GS4.** communicate effectively with team members at workplace
- **GS5.** plan work as per right sequence and organize required resources in coordination with the team members
- **GS6.** complete work as per the requirement
- **GS7.** evaluate and find solutions to minimize errors and suggest improvements for optimizing resource utilization
- **GS8.** assess which situations would require intervention of superiors









# **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Monitor and evaluate subordinates performance as per quality standards and timelines	40	40	-	-
<b>PC1.</b> fix expected targets for the respective gang as per site requirements and allocate work to subordinates	-	-	-	-
<b>PC2.</b> establish expected performance standards and expectations for the respective gang of workers to meet the desired outcomes	-	-	-	-
<b>PC3.</b> inspect assigned work to the respected gang of workers through progressive checking	-	-	-	-
<b>PC4.</b> observe and verify the work activities performed by the subordinates at the construction site	-	-	-	-
<b>PC5.</b> monitor overall performance of subordinates on the designed measures to ensure quality requirements set by the concerned authority	-	-	-	-
<b>PC6.</b> ensure adherence to the organizational policies and procedures for all relevant construction activities by the workmen subordinations	-	-	-	-
Practice and promote gender inclusive behavior and leadership	10	10	-	-
<b>PC7.</b> promote a safe, supportive, inclusive and gender sensitive environment at workplace.	-	-	-	-
<b>PC8.</b> manage and facilitate capacity building to enable inclusion of all genders	-	-	-	-
<b>PC9.</b> take prompt corrective action in case of inappropriate behavior at workplace	-	-	-	-
NOS Total	50	50	-	-









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

NOS Code	CON/N8003
NOS Name	Supervise, monitor and evaluate performance of subordinates at workplace
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic 2
NSQF Level	6
Credits	TBD
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	20	30	-	-
<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	12	18	-	-
<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	-	-	-	-
PC12. 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	-	-	-	-
<b>PC14.</b> 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	8	12	-	-
<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	40	60	-	-









# **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
NSQF Level	5
Credits	TBD
Version	3.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022

# 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)/ 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	40	60	-	-	100	20
CON/N0612.Establish electrical connections during erection of plant and heavy construction machineries	40	60	-	-	100	20
CON/N0613.Conduct permanent wiring and maintenance work in buildings	40	60	-	-	100	20
CON/N8001.Work effectively in a team to deliver desired results at the workplace	40	60	-	-	100	10
CON/N8002.Plan and organize work to meet expected outcomes	40	60	-	-	100	5









National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N8003.Supervise, monitor and evaluate performance of subordinates at workplace	50	50	-	-	100	10
CON/N9002.Manage workplace for safe and healthy work environment	40	60	-	-	100	15
Total	290	410	-	-	700	100









# **Acronyms**

NOS	National Occupational Standard(s)	
NSQF	National Skills Qualifications Framework	
QP	Qualifications Pack	
TVET	Technical and Vocational Education and Training	









# 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.