









# Construction Electrician - LV

QP Code: CON/Q0603

Version: 3.0

NSQF Level: 4

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### CON/Q0603: Construction Electrician - LV

#### **Brief Job Description**

This job role is responsible for laying of cables, installation, and maintenance of equipment like motors, bar cutting machine, bar shearing machine etc. at construction site as per the requirement of construction activities. The responsibilities also include carrying out permanent wiring and assisting the foreman in electrification of buildings. The job holder uses the electrical drawings, diagrams, and related documents to carry out the activities.

#### **Personal Attributes**

The construction electrician - LV 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. CON/N0608: Lay (single/ three phase) cable and provide electrification for equipment at construction sites
- 2. <u>CON/N0609</u>: Inspect electrical maintenance of construction equipment as per requirement
- 3. CON/N0610: Carry out LV electrical wiring and assist the foreman in building electrification works
- 4. CON/N8001: Work effectively in a team to deliver desired results at the workplace
- 5. <u>CON/N8002</u>: This unit describes the knowledge and the skills required for an individual to plan and <u>organize own work in order to meet expected outcome</u>
- 6. <u>CON/N9001</u>: Work according to personal health, safety and environment protocols at construction site
- 7. DGT/VSQ/N0102: Employability Skills (60 Hours)

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

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction









Occupation	Construction Electrical Works
Country	India
NSQF Level	4
Credits	16
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7411.0100
Minimum Educational Qualification & Experience	OR Completed 1st year of 3-year diploma (after 10th) and pursuing regular diploma OR 10th grade pass plus 1-year NTC/ NAC OR 8th grade pass plus 2-year NTC plus 1 Year NAC (relevant experience) OR 10th grade pass with 2 Years of experience relevant experience OR 10th grade pass and pursuing continuous schooling OR 5th grade pass (Previous relevant Qualification of NSQF Level 3.0 ) OR No formal education prescribed (Previous relevant Qualification of NSQF Level 3.5 )
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	Low Voltage electrical work license from recognized licensing authority
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	31/03/2025
NSQC Approval Date	31/03/2022
Version	3.0
Reference code on NQR	2022/CON/CSDCI/06623
NQR Version	1









# CON/N0608: Lay (single/ three phase) cable and provide electrification for equipment at construction sites

#### **Description**

This unit describes the skills and knowledge required to lay (single/ three-phase) cable and provide electrification for equipment at construction sites

#### Scope

The scope covers the following:

- Prepare for cable laying
- Lay cable and provide electrification for construction equipment

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

#### Prepare for cable laying

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

- **PC1.** assist superior in planning (method, material specification, time requirement) of cable laying activity at construction sites
- **PC2.** read and interpret electrical drawings, specifications, manufacturers guidelines as and when required
- **PC3.** check cables, lights and accessories to be used according to instructions/ drawings/ manufacturers specifications as per applicability
- **PC4.** inspect work area for embedded service lines, presence of water table, and vicinity of flammable items prior to cable laying
- **PC5.** carry out safe isolation of power source as per applicable specification/ electrical safety norms and erect caution signages at appropriate location
- **PC6.** arrange for execution of preparatory activities such as digging of trenches, laying of conduits, erection of poles etc.
- **PC7.** fill up necessary permits, checklists as per organizational norms for preparatory activities

#### Lay cable and provide electrification for construction equipment

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

- **PC8.** lay cables according to standard practice through trenches, conduits or by means of poles at construction sites
- **PC9.** check for rigidity of poles, condition of exposed cables and fittings, depth and backfilling of trenches, proper barricading as per safety norms as and when necessary
- **PC10.** connect cable to power source and electrical equipment/ machinery as per manufacturers quidelines or standard practice
- **PC11.** carry out proper termination of cables as per specification or standard practice
- **PC12.** install circuit breakers, starters, relays etc. of correct power rating as per specification of the equipment
- PC13. carry out earthing of the equipment (if applicable) by suitable method









- **PC14.** carry out trial run and perform applicable electrical tests to ensure safe and desired working of construction equipment
- **PC15.** secure exposed cables and its accessories against man, vehicular movement or any other external abrasive effects by adopting suitable insulation methods or industry recognized standard practices
- **PC16.** ensure upkeep of all electrical tools and equipment under operation, according to manufacturers guidelines or standard procedures
- **PC17.** ensure tagging of embedded, exposed electrical lines, its accessories and other equipment
- **PC18.** ensure proper housekeeping of the work area

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

The individual on the job needs to know and understand:

- **KU1.** standard practices for establishing temporary LV power connection arrangement at the construction site
- **KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials for electrical 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.** guidelines provided in Indian Standard code of practice applicable to electrical works
- **KU6.** wiring symbols used in single and three phase connections
- **KU7.** how to read and interpret single line diagram (SLD), and schematics, wiring diagrams of electrical connection
- **KU8.** manufacturers guidelines/ specifications for use of hand and power tools and measuring devices
- **KU9.** electrical units of measurements and their signs (such as Watt, Ampere, Ohm, volt etc.)
- KU10. concept of AC, DC, circuits and their respective properties
- **KU11.** concept about working principle of AC and DC circuits and factors related to the same
- **KU12.** sequencing and executing cable laying at construction sites as per standard practice, plans or instructions
- **KU13.** concept of 3 phase circuit and its advantages over single-phase connection, star and delta connection
- **KU14.** requirement of cables and accessories (single phase/ 3 phase) of equipment
- **KU15.** features of AC single phase and 3 phase connections including star and delta connections
- **KU16.** tests to be performed in balanced 3 phase circuits
- **KU17.** checks to be done for the cables and their laying locations at construction sites to ensure safe working condition
- **KU18.** standard procedures of safeguarding exposed cables against external damages
- **KU19.** the process of measuring resistance, electrical current flow, voltage as per requirement using appropriate electrical measuring devices like digital multimeter, tong tester, digital voltmeter, etc.
- **KU20.** safe method of electrical isolation and use of tools in the operation









- **KU21.** different methods of earthing including measurement of earth resistance by earth tester, testing of earth Leakage by ELCB and relay, etc.
- **KU22.** standard procedure of termination of cables at the power sources and equipment
- **KU23.** use of MCB, RCCB and ELCB in equipment, their working principles and power ratings
- **KU24.** concepts of electrical circuits which includes properties and functions of RCL circuits, inductive DC, AC circuits, details of capacitors, inductors and their actions in DC, AC circuits
- **KU25.** type of connections and tests to be carried out in capacitive, inductive AC and DC circuits
- **KU26.** operational characteristics of electrical systems and internal components

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

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

- **GS1.** write in at least two languages, preferably the local language at the site and basic English
- **GS2.** read SLDs, work, and safety-related instructions/signboards in one or more languages, preferably in the local language of the site
- **GS3.** speak in at least one language, preferably in one of the local languages of the site
- **GS4.** listen attentively to instructions communicated by supervisors
- **GS5.** communicate orally and efficiently with team members
- **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 team members
- **GS9.** analyze the safety aspect of the workplace
- **GS10.** evaluate the complexity of the tasks
- **GS11.** identify any violation of safety norms during the work









## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Prepare for cable laying	12	28	-	-
<b>PC1.</b> assist superior in planning (method, material specification, time requirement) of cable laying activity at construction sites	-	-	-	-
<b>PC2.</b> read and interpret electrical drawings, specifications, manufacturers guidelines as and when required	-	-	-	-
<b>PC3.</b> check cables, lights and accessories to be used according to instructions/ drawings/ manufacturers specifications as per applicability	-	-	-	-
<b>PC4.</b> inspect work area for embedded service lines, presence of water table, and vicinity of flammable items prior to cable laying	-	-	-	-
<b>PC5.</b> carry out safe isolation of power source as per applicable specification/ electrical safety norms and erect caution signages at appropriate location	-	-	-	-
<b>PC6.</b> arrange for execution of preparatory activities such as digging of trenches, laying of conduits, erection of poles etc.	-	-	-	-
<b>PC7.</b> fill up necessary permits, checklists as per organizational norms for preparatory activities	-	-	-	-
Lay cable and provide electrification for construction equipment	18	42	-	-
<b>PC8.</b> lay cables according to standard practice through trenches, conduits or by means of poles at construction sites	-	-	-	-
<b>PC9.</b> check for rigidity of poles, condition of exposed cables and fittings, depth and backfilling of trenches, proper barricading as per safety norms as and when necessary	-	-	-	-
<b>PC10.</b> connect cable to power source and electrical equipment/ machinery as per manufacturers guidelines or standard practice	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> carry out proper termination of cables as per specification or standard practice	-	-	-	-
<b>PC12.</b> install circuit breakers, starters, relays etc. of correct power rating as per specification of the equipment	-	-	-	-
<b>PC13.</b> carry out earthing of the equipment (if applicable) by suitable method	-	-	-	-
<b>PC14.</b> carry out trial run and perform applicable electrical tests to ensure safe and desired working of construction equipment	-	-	-	-
<b>PC15.</b> secure exposed cables and its accessories against man, vehicular movement or any other external abrasive effects by adopting suitable insulation methods or industry recognized standard practices	-	-	-	-
<b>PC16.</b> ensure upkeep of all electrical tools and equipment under operation, according to manufacturers guidelines or standard procedures	-	-	-	-
<b>PC17.</b> ensure tagging of embedded, exposed electrical lines, its accessories and other equipment	-	-	-	-
<b>PC18.</b> ensure proper housekeeping of the work area	-	-	-	-
NOS Total	30	70	-	-









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

NOS Code	CON/N0608
NOS Name	Lay (single/ three phase) cable and provide electrification for equipment at construction sites
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
NSQF Level	4
Credits	3
Version	3.0
Last Reviewed Date	NA
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022









# **CON/N0609:** Inspect electrical maintenance of construction equipment as per requirement

#### **Description**

This unit describes the skills and knowledge required to inspect electrical maintenance of construction equipment as per the requirement.

#### Scope

The scope covers the following:

• Carry out repair and maintenance of cables and construction equipment

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

#### Carry out repair and maintenance of cables and construction equipment

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

- **PC1.** carry out appropriate tests and diagnose electrical faults of equipment as and when necessary
- **PC2.** power off equipment under maintenance or take necessary precautions as per standard practice while performing tests on live circuits
- **PC3.** carry out safe isolation at power source as per applicable specification/ electrical safety norms and erect caution signages at appropriate location
- **PC4.** determine the type (DC/AC) of motors to be repaired or installed
- **PC5.** repair or replace faulty parts according to the power rating and manufacturers guideline relevant to circuit under maintenance
- **PC6.** use appropriate motor starters according to the specification and power rating of motors during maintenance
- **PC7.** carry out winding in armatures of motor if required as per specification of motor
- **PC8.** inspect and rectify faults detected in earthing of construction equipment, referring to manufacturers guidelines
- **PC9.** replace faulty parts like relays, MCBs, wires, switches, sockets etc
- **PC10.** inspect leakage, faults in LV single/ three phase power distribution wirings as per directions, standard practices
- **PC11.** operate and inspect transformers to detect faults under close supervision
- **PC12.** carry out maintenance of lighting arrangements installed at critically accessable locations such as tower cranes, high masts etc. and replace faulty parts, consumables as and when required
- **PC13.** join damaged armored cables (bearing heavy electricity loads) using straight through joints efficiently
- **PC14.** operate changeover switches for switching between main power supply & DGS as per requirement
- **PC15.** ensure safe and desired working of temporary electrical panels/ distribution boards at construction sites









- **PC16.** notify concerned authorities prior to undertaking maintenance activity as per applicable organizational norms
- **PC17.** document readings, conclusions of tests performed as per requirement

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

The individual on the job needs to know and understand:

- **KU1.** standard practices and procedures for maintenance of temporary electrical works / panels
- **KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials for electrical 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.** guidelines provided in Indian Standard code of practice applicable to electrical works
- **KU6.** wiring symbols used in single and three phase connections
- **KU7.** how to read and interpret single line diagram (SLD), and schematics, wiring diagrams of electrical connection
- **KU8.** type of cables (single phase/ 3 phase) are to be used based on electrical load requirement of circuits, insulations and type of equipment to be installed
- **KU9.** use of measuring devices like digital multimeter, tong tester, digital voltmeter while establishing electrical connections to the equipment at construction sites
- **KU10.** concepts of electrical circuits which includes properties and functions of RCL circuits, inductive DC, AC circuits, details of capacitors, inductors and their actions in DC, AC circuits
- **KU11.** type of connections and tests to be carried out in capacitive, inductive AC and DC circuits
- **KU12.** working principle of different types of motors and their respective uses
- KU13. concept of star, delta connection and their uses in electrical circuits
- **KU14.** concept and working principle of various type of starters used in DC motors such as 3point, 4 point etc. as well as 3 phase squirrel cage induction motors such as DOL, Star-Delta etc
- **KU15.** working principle of different types of 3 phase transformers, connections (starstar, deltadelta, delta-star) and their components
- **KU16.** basic concept of application of respective transformers and relevant terminologies like magnetic flux, winding, current and voltage ratio, core and shell construction etc
- **KU17.** different methods of earthing including measurement of earth resistance by earth tester, testing of earth Leakage by ELCB and relay, etc.
- **KU18.** standard procedure of termination of cables at the power sources and equipment
- **KU19.** use of MCB, RCCB and ELCB in equipment , their working principles and power ratings
- **KU20.** operational characteristics of electrical systems and internal components

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

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

**GS1.** write in at least two languages, preferably the local language at the site and basic English









- **GS2.** read SLDs, work and safety-related instructions/signboards in one or more languages, preferably in the local language of the site
- **GS3.** speak in at least one language, preferably in one of the local languages of the site
- **GS4.** communicate orally and efficiently 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
Carry out repair and maintenance of cables and construction equipment	30	70	-	-
<b>PC1.</b> carry out appropriate tests and diagnose electrical faults of equipment as and when necessary	-	-	-	-
<b>PC2.</b> power off equipment under maintenance or take necessary precautions as per standard practice while performing tests on live circuits	-	-	-	-
<b>PC3.</b> carry out safe isolation at power source as per applicable specification/ electrical safety norms and erect caution signages at appropriate location	-	-	-	-
<b>PC4.</b> determine the type (DC/AC) of motors to be repaired or installed	-	-	-	-
<b>PC5.</b> repair or replace faulty parts according to the power rating and manufacturers guideline relevant to circuit under maintenance	-	-	-	-
<b>PC6.</b> use appropriate motor starters according to the specification and power rating of motors during maintenance	-	-	-	-
<b>PC7.</b> carry out winding in armatures of motor if required as per specification of motor	-	-	-	-
<b>PC8.</b> inspect and rectify faults detected in earthing of construction equipment, referring to manufacturers guidelines	-	-	-	-
<b>PC9.</b> replace faulty parts like relays, MCBs, wires, switches, sockets etc	-	-	-	-
<b>PC10.</b> inspect leakage, faults in LV single/ three phase power distribution wirings as per directions, standard practices	-	-	-	-
<b>PC11.</b> operate and inspect transformers to detect faults under close supervision	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> carry out maintenance of lighting arrangements installed at critically accessable locations such as tower cranes, high masts etc. and replace faulty parts, consumables as and when required	-	-	-	-
<b>PC13.</b> join damaged armored cables (bearing heavy electricity loads) using straight through joints efficiently	-	-	-	-
<b>PC14.</b> operate changeover switches for switching between main power supply & DGS as per requirement	-	-	-	-
<b>PC15.</b> ensure safe and desired working of temporary electrical panels/ distribution boards at construction sites	-	-	-	-
<b>PC16.</b> notify concerned authorities prior to undertaking maintenance activity as per applicable organizational norms	-	-	-	-
<b>PC17.</b> document readings, conclusions of tests performed as per requirement	-	-	-	-
NOS Total	30	70	-	-









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

NOS Code	CON/N0609
NOS Name	Inspect electrical maintenance of construction equipment as per requirement
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
NSQF Level	4
Credits	3
Version	3.0
Last Reviewed Date	NA
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022









# CON/N0610: Carry out LV electrical wiring and assist the foreman in building electrification works

#### **Description**

This unit describes the skills and knowledge required to carry out LV electrical wiring and provide assistance in building electrification works.

#### Scope

The scope covers the following:

- Perform concealed / exposed wiring and electrification
- Install and maintain electrical fixtures/ fittings, earthing arrangement and home appliances

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

#### Perform concealed /exposed wiring and electrification

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

- **PC1.** perform visual checks of the house wiring components (such as wires, flexible and rigid conduits, PVC raceways, wooden battens, clamps etc.) prior to its use in concealed wiring
- **PC2.** read and interpret single phase wiring diagram and assist in estimation of required materials
- **PC3.** carry out necessary measurements of cables/ conduits to meet working needs and in order to carry out marking on wall
- **PC4.** mark the walls for chasing for concealed wiring, and monitor the chasing work
- **PC5.** assist in planning for electrification, and mark locations for installation of raceways and electrical fixtures/ fittings on the walls
- **PC6.** lay flexible conduit pipes through RCC structures (slabs, beams, walls) or through chased wall (brick wall) surface as per instruction
- **PC7.** ensure to lock conduit pipe in its location using clamps or other standard means
- **PC8.** place wires through conduits and raceways ensuring that wires are as per specification and numbers
- **PC9.** carry out drilling and cutting works as per requirement

Install and maintain electrical fixtures/ fittings, earthing arrangement and home appliances

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

- **PC10.** prepare tentative budget for household wiring and electrification work
- PC11. calculate electrical material requirements based on electrical fittings and layouts
- **PC12.** carry out safe isolation of power source as per applicable specification/ electrical safety norms and erect caution signages at appropriate location
- **PC13.** install electrical fixtures, fittings (such as DBs, switch boards, switches, sockets, lights and wall brackets) at specified locations and carry out termination of cables as per standard practice
- **PC14.** perform necessary tests to ensure safe condition of electrical circuit during and post wiring activity using appropriate tools









- **PC15.** measure earth resistance and leakage as per requirement, using appropriate electrical devices
- **PC16.** carry out electrical earthing work adopting standard procedure and using appropriate earthing components as per instructions
- **PC17.** establish new LV connection if required as per circuit load requirement and install household appliances including fan, water pump, refrigerator, fire alarm system, security systems etc
- **PC18.** identify and install protective devices of correct power rating, at appropriate locations of wiring
- **PC19.** adhere to electrical safety norms and act/ report efficiently on detection of any unsafe situation
- **PC20.** note relevant readings and fill up checklist as per requirement

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

The individual on the job needs to know and understand:

- **KU1.** standard practices for electrical wiring and electrification works
- **KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials for electrical 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.** guidelines provided in Indian Standard code of practice applicable to electrical works
- **KU6.** statutory guidelines provided by ISI for LV wiring operations
- **KU7.** drawings, circuit diagrams and/or related schematics for single and three-phase LV house wiring system
- **KU8.** how to estimate required material quantity from electrical drawings
- **KU9.** manufacturers guidelines/ specifications for use of electrical fittings and fixtures
- **KU10.** use of 3 phases, single phase connections as per electrical drawing, specifications
- **KU11.** specification, color coding of cables to be used in wiring system according to load on circuit
- **KU12.** properties of different components used in electrical earthing work
- **KU13.** principle of different methods of earthing i.e. pipe, plate, etc.
- **KU14.** the process of measurement of Earth resistance by earth tester
- KU15. test of Earth Leakage by ELCB and relay
- **KU16.** area of application & specification of protective devices like fire alarm, MCB, ELCB, MCCB
- **KU17.** how to plan lighting arrangement which may enable maximum use of natural lights
- **KU18.** current tentative market rate of common electrical items
- **KU19.** common electrical brands and their products and customer preferences regarding brands and trends
- **KU20.** standard house wiring procedure and best practices
- **KU21.** use of ladders, scaffolds, PPEs, shock resistance gloves during working/ performing tests in a live circuit
- **KU22.** use of power drill machine and selection of drill bit for drilling works









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

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

- **GS1.** write in at least two languages, preferably the local language at the site and basic English
- **GS2.** read SLDs, work and safety-related instructions/signboards in one or more languages, preferably in the local language of the site
- **GS3.** communicate orally and effectively with team members
- **GS4.** decide on the safety of the workplace and ensure the work does not create hazardous conditions
- **GS5.** plan work and organize required resource effectively
- **GS6.** complete work as per agreed time schedule and quality parameters
- **GS7.** resolve any conflict within the teammates
- **GS8.** evaluate the complexity of the tasks
- GS9. identify any violation of safety norms during the work









## **Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Perform concealed /exposed wiring and electrification	15	35	-	-
<b>PC1.</b> perform visual checks of the house wiring components (such as wires, flexible and rigid conduits, PVC raceways, wooden battens, clamps etc.) prior to its use in concealed wiring	-	-	-	-
<b>PC2.</b> read and interpret single phase wiring diagram and assist in estimation of required materials	-	-	-	-
<b>PC3.</b> carry out necessary measurements of cables/ conduits to meet working needs and in order to carry out marking on wall	-	-	-	-
<b>PC4.</b> mark the walls for chasing for concealed wiring, and monitor the chasing work	-	-	-	-
<b>PC5.</b> assist in planning for electrification, and mark locations for installation of raceways and electrical fixtures/ fittings on the walls	-	-	-	-
<b>PC6.</b> lay flexible conduit pipes through RCC structures (slabs, beams, walls) or through chased wall (brick wall) surface as per instruction	-	-	-	-
<b>PC7.</b> ensure to lock conduit pipe in its location using clamps or other standard means	-	-	-	-
<b>PC8.</b> place wires through conduits and raceways ensuring that wires are as per specification and numbers	-	-	-	-
<b>PC9.</b> carry out drilling and cutting works as per requirement	-	-	-	-
Install and maintain electrical fixtures/ fittings, earthing arrangement and home appliances	15	35	-	-
<b>PC10.</b> prepare tentative budget for household wiring and electrification work	-	-	-	-
<b>PC11.</b> calculate electrical material requirements based on electrical fittings and layouts	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> carry out safe isolation of power source as per applicable specification/ electrical safety norms and erect caution signages at appropriate location	-	-	-	-
<b>PC13.</b> install electrical fixtures, fittings (such as DBs, switch boards, switches, sockets, lights and wall brackets) at specified locations and carry out termination of cables as per standard practice	-	-	-	-
<b>PC14.</b> perform necessary tests to ensure safe condition of electrical circuit during and post wiring activity using appropriate tools	-	-	-	-
<b>PC15.</b> measure earth resistance and leakage as per requirement, using appropriate electrical devices	-	-	-	-
<b>PC16.</b> carry out electrical earthing work adopting standard procedure and using appropriate earthing components as per instructions	-	-	-	-
<b>PC17.</b> establish new LV connection if required as per circuit load requirement and install household appliances including fan, water pump, refrigerator, fire alarm system, security systems etc	-	-	-	-
<b>PC18.</b> identify and install protective devices of correct power rating, at appropriate locations of wiring	-	-	-	-
<b>PC19.</b> adhere to electrical safety norms and act/report efficiently on detection of any unsafe situation	-	-	-	-
<b>PC20.</b> note relevant readings and fill up checklist as per requirement	-	-	-	-
NOS Total	30	70	-	-









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

NOS Code	CON/N0610
NOS Name	Carry out LV electrical wiring and assist the foreman in building electrification works
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Construction Electrical Works
NSQF Level	4
Credits	5
Version	3.0
Last Reviewed Date	NA
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	18	42	-	-
<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	6	14	-	-
<b>PC7.</b> hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams	-	-	-	-
<b>PC8.</b> work together with co-workers in a synchronized manner	-	-	-	-
Practice inclusion	6	14	-	-
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	30	70	-	-









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

NOS Code	CON/N8001
NOS Name	Work effectively in a team to deliver desired results at the workplace
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic 2
NSQF Level	4
Credits	1
Version	10.0
Last Reviewed Date	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023









### 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	9	21	-	-
PC1. 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	6	14	-	-
<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	15	35	-	-
<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	30	70	-	-









## **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	1
Version	7.0
Last Reviewed Date	NA
Next Review Date	19/07/2023
NSQC Clearance Date	19/01/2023









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

#### **Description**

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

#### Scope

The scope covers the following:

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

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

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

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

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

#### Adopt healthy & safe work practices

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

- **PC7.** use appropriate Personal Protective Equipment (PPE) as per work requirements for : Head Protection, Ear protection, Fall Protection ,Foot Protection, Face and Eye Protection, Hand and Body Protection , and Respiratory Protection (if required)
- **PC8.** handle all required tools, tackles, materials and equipment safely
- **PC9.** follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines
- PC10. check and install all safety equipment as per standard guidelines
- PC11. follow safety protocols and practices as laid down by site EHS department
- PC12. obtain "height pass" clearance for working at heights

#### Implement good housekeeping practices

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

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









#### PC14. apply ergonomic principles wherever required

#### Follow infection control guidelines as per applicability

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

- PC15. follow recommended personal hygiene, workplace hygiene and sanitization practices
- **PC16.** clean and disinfect all materials, tools and supplies before and after use
- **PC17.** report immediately to concerned authorities regarding signs and symptoms of illness of self and others

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

The individual on the job needs to know and understand:

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

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

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

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









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









## **Assessment Criteria**

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









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









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

NOS Code	CON/N9001
NOS Name	Work according to personal health, safety and environment protocols at construction site
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic Safety
NSQF Level	4
Credits	1
Version	8.0
Last Reviewed Date	NA
Next Review Date	19/07/2023
NSQC Clearance Date	19/01/2023









## **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	-	-	-	-
PC15. 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	-	-	-	-
PC19. 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	-	-	-	-
PC21. 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	-	-	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Entrepreneurship	2	3	-	-
<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.	-	-	-	-
<b>PC28.</b> 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	31/08/2023
Next Review Date	31/08/2026
NSQC Clearance Date	31/08/2023

## 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)/ Elements 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/ Elements.
- 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 time frame 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/N0608.Lay (single/ three phase) cable and provide electrification for equipment at construction sites	30	70	0	0	100	20
CON/N0609.Inspect electrical maintenance of construction equipment as per requirement	30	70	0	0	100	20
CON/N0610.Carry out LV electrical wiring and assist the foreman in building electrification works	30	70	0	0	100	25
CON/N8001.Work effectively in a team to deliver desired results at the workplace	30	70	-	-	100	10
CON/N8002. This unit describes the knowledge and the skills required for an individual to plan and organize own work in order to meet expected outcome	30	70	-	-	100	10









National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N9001.Work according to personal health, safety and environment protocols at construction site	30	70	-	-	100	10
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	0	0	50	5
Total	200	450	0	0	650	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.