Qualification Pack

# Solar LED Technician

QP Code: ELE/Q5903

Version: 4.0

NSQF Level: 4

Electronics Sector Skills Council of India || 155, 2nd Floor, ESC House Okhla Industrial Area-Phase 3
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Qualification Pack

# ELE/Q5903: Solar LED Technician

## Brief Job Description

The individual is capable of installing various types of solar home based LED lighting, outdoor and street lighting as per given instructions. The person should be able to identify faults in a solar PV system and carry out repair at preliminary level in line with given performance parameters. The individual must adhere to all the relevant environmental, safety and regulatory requirements while carrying out his/her job duties.

## Personal Attributes

An individual on this job must have good communication and interpersonal skills. The individual must exhibit good customer handling attributes, good decision-making skills and focussed on quality work outcome, should be courteous, solution-oriented, polite. The individual should possess an alert mind, a physically active body and energetic. The individual should be responsible for own outcome and work in a team.

## Applicable National Occupational Standards (NOS)

### Compulsory NOS:

1. ELE/N5911: Carry out the installation of the Solar PV System
2. ELE/N5912: Carry out maintenance and repairs on the Solar PV System
3. DGT/VSQ/N0101: Employability Skills (30 Hours)

## Qualification Pack (QP) Parameters

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|---|---|
| **Sector** | Electronics |
| **Sub-Sector** | Solar & LED |
| **Occupation** | Installation-S&L |
| **Country** | India |
| **NSQF Level** | 4 |
| **Credits** | 15 |
| **Aligned to NCO/ISCO/ISIC Code** | NCO-2015/7421.1401 |

**Qualification Pack**

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|---|---|
| **Minimum Educational Qualification & Experience** | 12th grade Pass (or equivalent in Science) with NA of experience<br>OR<br>10th grade pass with 3 Years of experience Relevant Experience in Solar & LED industries<br>OR<br>Certificate-NSQF (Level 3.5) with 1.5 years of experience Relevant experience in Solar & LED industries |
| **Minimum Level of Education for Training in School** | 10th Class |
| **Pre-Requisite License or Training** | NA |
| **Minimum Job Entry Age** | 18 Years |
| **Last Reviewed On** | NA |
| **Next Review Date** | 08/05/2028 |
| **NSQC Approval Date** | 08/05/2025 |
| **Version** | 4.0 |
| **Reference code on NQR** | QG-04-EH-02821-2025-V4-ESSC |
| **NQR Version** | 4.0 |

**Remarks:**

| |
|---|
| NA |

Qualification Pack

# ELE/N5911: Carry out the installation of the Solar PV System

## Description

This NOS unit is about Install and connect solar PV systems as per standards and safety norms.

## Scope

The scope covers the following :

- Identify job requirements to prepare work plan and visit customer site
- Install PV panel structure
- Analyze specific requirements for roof structure
- Assemble panels
- Connect panels and fix solar LED lightings
- Post installation activities

## Elements and Performance Criteria

*Identify job requirements to prepare work plan and visit customer site*

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

**PC1.** coordinate with supervisor for work order to identify job requirements

**PC2.** interpret drawings, schematics and site layout for PV system installation

**PC3.** prepare a plan to carry out the work as per organizational approved standards, procedures, appropriate techniques and manufacturer's instructions for PV system installation

**PC4.** analyze the different aspects of solar technologies such as solar photo voltaic and solar thermal technologies, including possible risks/hazards of PV system

**PC5.** select calibrated tools/equipment, testing devices and materials/items to conduct solar installation work

**PC6.** identify the required system components, asper job specifications, in compliance with relevant performance and safety standards defined in IEC and other international standards

*Install PV panel structure*

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

**PC7.** Visit for customer site surveys using GPS as per work plan for Carrying out installation

**PC8.** perform preliminary checks of site prior to installation of PV system using mart mounting systems.

**PC9.** mark the work area accurately in accordance with measurements/estimations of the diagram layout

**PC10.** prepare appropriate type of structures which are treated prior to fixing the panels as per standard requirements

**PC11.** assemble the structure safely and securely using approved methods and materials

**PC12.** inspect that buildings have been water- proofed wherever the array cables pass through the building fabric

*Analyze specific requirements for roof structure*

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

**PC13.** fix solar PV modules on different types of roof materials using appropriate techniques

**PC14.** remove the roof safely without causing any damage to the surrounding area for home based solar lighting

**PC15.** store removed roof covering safely at appropriate location, protected from any possible leakage or damage

**PC16.** verify that the exposed roof area is in appropriate condition to carry out the installation work

**PC17.** check that brackets do not interfere with the integrity of the roof covering

*Assemble panels*

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

**PC18.** inspect that the structure/brackets are in safe condition to undergo fixing procedures

**PC19.** fix the appropriate type of mounting System on the given structure by applying suitable fixing methods

**PC20.** check that panels are in good working condition/undamaged during handling and move them to the installation area

**PC21.** fix the panels to the mounting system and brackets using correct fixing accessories/cable containments

**PC22.** check that the panels are securely fastened to the brackets or mounting bars using appropriate tools and method

**PC23.** report problems or issues, if any, with the safety of system structures and violation of regulatory norms to the appropriate authority

*Connect panels and fix solar LED lightings*

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

**PC24.** select appropriate connecting methods of the modules

**PC25.** terminate the wiring correctly in line with manufacturer's instructions, operational and regulatory requirements

**PC26.** allocate appropriate string voltages and current to inverter rating and overall system installation

**PC27.** perform approved cable routing Procedures within solar photovoltaic module arrays

**PC28.** test the operation of the PV system including panel/module connections, connecting cables and complete array structure, etc. using approved procedures

**PC29.** select the appropriate type of electronics luminaries such as LED lightings and their specifications that comply with performance parameters of the installed PV system

*Post installation activities*

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

**PC30.** document required information after Handover of the completed work to the customer

**PC31.** provide information to customer about manufacturer's guide on annual maintenance contract, warranty and guarantees, schedule maintenance tracker, etc.

**PC32.** return all used tools and equipment safely In their appropriate storage area

**PC33.** perform steps to dispose toxic and non- toxic waste materials as per relevant environmental safety policies

**PC34.** resolve customer queries, concerns and requests in line with relevant organization's Policies on customer service

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** Understand the components, working principles, and types of solar PV systems.
**KU2.** Know how to interpret technical drawings, wiring diagrams, and site layouts.
**KU3.** Be aware of IEC and other international standards for PV installation.
**KU4.** Understand procedures for safe use of tools, equipment, and materials in solar projects.
**KU5.** Have knowledge of different mounting systems and appropriate fixing methods.
**KU6.** Understand electrical wiring, string voltages, inverter compatibility, and termination practices.
**KU7.** Know safety protocols for roof installations and structural integrity checks.
**KU8.** Be familiar with environmental policies related to waste disposal after installation.
**KU9.** Understand how to assess site feasibility using GPS and preliminary checks.
**KU10.** Be aware of customer documentation, warranty, and post-installation support practices.

## Generic Skills (GS)

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

**GS1.** Ability to read and interpret site plans, schematics, and installation diagrams accurately.
**GS2.** Skill in safely handling, assembling, and fixing solar panels and mounting systems.
**GS3.** Ability to conduct effective site surveys and feasibility assessments.
**GS4.** Proficiency in using tools and measuring equipment required for PV installations.
**GS5.** Capability to follow safety standards and report any site hazards or risks.
**GS6.** Competence in testing electrical connections and verifying system performance.
**GS7.** Effective communication skills for interacting with customers and team members.
**GS8.** Ability to document installation work and maintain accurate project records.
**GS9.** Problem-solving skills to troubleshoot issues during and after installation.
**GS10.** Time management and planning skills to execute work within given timelines.

## Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| *Identify job requirements to prepare work plan and visit customer site* | **11** | **10** | **-** | **2** |
| **PC1.** coordinate with supervisor for work order to identify job requirements | - | - | - | - |
| **PC2.** interpret drawings, schematics and site layout for PV system installation | - | - | - | - |
| **PC3.** prepare a plan to carry out the work as per organizational approved standards, procedures, appropriate techniques and manufacturer's instructions for PV system installation | - | - | - | - |
| **PC4.** analyze the different aspects of solar technologies such as solar photo voltaic and solar thermal technologies, including possible risks/hazards of PV system | - | - | - | - |
| **PC5.** select calibrated tools/equipment, testing devices and materials/items to conduct solar installation work | - | - | - | - |
| **PC6.** identify the required system components, asper job specifications, in compliance with relevant performance and safety standards defined in IEC and other international standards | - | - | - | - |
| *Install PV panel structure* | **6** | **10** | **-** | **3** |
| **PC7.** Visit for customer site surveys using GPS as per work plan for Carrying out installation | - | - | - | - |
| **PC8.** perform preliminary checks of site prior to installation of PV system using mart mounting systems. | - | - | - | - |
| **PC9.** mark the work area accurately in accordance with measurements/estimations of the diagram layout | - | - | - | - |
| **PC10.** prepare appropriate type of structures which are treated prior to fixing the panels as per standard requirements | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| **PC11.** assemble the structure safely and securely using approved methods and materials | - | - | - | - |
| **PC12.** inspect that buildings have been water-proofed wherever the array cables pass through the building fabric | - | - | - | - |
| *Analyze specific requirements for roof structure* | **5** | **7** | **-** | **-** |
| **PC13.** fix solar PV modules on different types of roof materials using appropriate techniques | - | - | - | - |
| **PC14.** remove the roof safely without causing any damage to the surrounding area for home based solar lighting | - | - | - | - |
| **PC15.** store removed roof covering safely at appropriate location, protected from any possible leakage or damage | - | - | - | - |
| **PC16.** verify that the exposed roof area is in appropriate condition to carry out the installation work | - | - | - | - |
| **PC17.** check that brackets do not interfere with the integrity of the roof covering | - | - | - | - |
| *Assemble panels* | **6** | **8** | **-** | **2** |
| **PC18.** inspect that the structure/brackets are in safe condition to undergo fixing procedures | - | - | - | - |
| **PC19.** fix the appropriate type of mounting System on the given structure by applying suitable fixing methods | - | - | - | - |
| **PC20.** check that panels are in good working condition/undamaged during handling and move them to the installation area | - | - | - | - |
| **PC21.** fix the panels to the mounting system and brackets using correct fixing accessories/cable containments | - | - | - | - |
| **PC22.** check that the panels are securely fastened to the brackets or mounting bars using appropriate tools and method | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| **PC23.** report problems or issues, if any, with the safety of system structures and violation of regulatory norms to the appropriate authority | - | - | - | - |
| *Connect panels and fix solar LED lightings* | **6** | **8** | **-** | **3** |
| **PC24.** select appropriate connecting methods of the modules | - | - | - | - |
| **PC25.** terminate the wiring correctly in line with manufacturer's instructions, operational and regulatory requirements | - | - | - | - |
| **PC26.** allocate appropriate string voltages and current to inverter rating and overall system installation | - | - | - | - |
| **PC27.** perform approved cable routing Procedures within solar photovoltaic module arrays | - | - | - | - |
| **PC28.** test the operation of the PV system including panel/module connections, connecting cables and complete array structure, etc. using approved procedures | - | - | - | - |
| **PC29.** select the appropriate type of electronics luminaries such as LED lightings and their specifications that comply with performance parameters of the installed PV system | - | - | - | - |
| *Post installation activities* | **6** | **7** | **-** | **-** |
| **PC30.** document required information after Handover of the completed work to the customer | - | - | - | - |
| **PC31.** provide information to customer about manufacturer's guide on annual maintenance contract, warranty and guarantees, schedule maintenance tracker, etc. | - | - | - | - |
| **PC32.** return all used tools and equipment safely In their appropriate storage area | - | - | - | - |
| **PC33.** perform steps to dispose toxic and non- toxic waste materials as per relevant environmental safety policies | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| **PC34.** resolve customer queries, concerns and requests in line with relevant organization's Policies on customer service | - | - | - | - |
| **NOS Total** | **40** | **50** | **-** | **10** |

## National Occupational Standards (NOS) Parameters

| | |
|---|---|
| **NOS Code** | ELE/N5911 |
| **NOS Name** | Carry out the installation of the Solar PV System |
| **Sector** | Electronics |
| **Sub-Sector** | |
| **Occupation** | Installation-S&L |
| **NSQF Level** | 4 |
| **Credits** | 7 |
| **Version** | 1.0 |
| **Last Reviewed Date** | 08/05/2025 |
| **Next Review Date** | 08/05/2028 |
| **NSQC Clearance Date** | 08/05/2025 |

Qualification Pack

# ELE/N5912: Carry out maintenance and repairs on the Solar PV System

## Description

This NOS unit is about carry out maintenance and repair of solar PV systems, ensuring safety and quality standards.

## Scope

The scope covers the following :

- Identify work requirements and prepare service kit
- Perform routine maintenance work at site
- Identify and repair faults
- Perform post repair and maintenance activities

## Elements and Performance Criteria

*Identify work requirements and prepare service kit*

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

**PC1.** coordinate with supervisor for work order to identify type of system fault from the job specifications

**PC2.** identify required resources, materials, tools, equipment and testing devices as per given job specification

**PC3.** verify that the identified tools/equipment are in working condition and safe to handle

**PC4.** check that the required type, quality and quantity of materials are available

*Perform routine maintenance work at site*

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

**PC5.** access the work site in accordance with organization’s approved procedures and state the purpose of visit

**PC6.** plan customer’s security coverage requirements in detail as per needs communicated

**PC7.** provide accurate information at all times in accordance with organizational quality Standards and procedures

**PC8.** inspect that circuits or machines are safely isolated as per regulatory requirements and organizational procedures

**PC9.** check that the identified work plan conforms to environmental, architectural, structural, site and regulatory requirements

**PC10.** perform washing away dust/dirt from the surface of the panels, using approved procedures and cleansing agents, to ensure panels/inverter are dust-free and moisture- free

**PC11.** inspect the integrated connection system for any loose wiring, connectors using approved testing procedures

*Identify and repair faults*

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

**PC12.** detect faults using IoT-based monitoring systems and mobile diagnostic apps in the functionality of the system using photo voltaic panel fault finding methods

**PC13.** repair, or replace, faulty components using approved methods without causing damage to any equipment, components, circuits, etc.

**PC14.** report any unprecedented problems identified in the work to responsible authority and seek advice on how to resolve them

*Perform post repair and maintenance activities*

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

**PC15.** perform steps to handover the completed work to the customer and demonstrate the operation of the system as per standard quality requirements

**PC16.** document the required information accurately after work completion as per organization's policies & procedures

**PC17.** resolve customer queries, concerns and requests efficiently and accurately in line with relevant organizational customer service practices

**PC18.** return all used tools and equipment safely in designated storage

**PC19.** perform steps to dispose toxic and non-toxic waste materials as per relevant environmental safety policies

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** Knowledge of solar PV system components and functionality.

**KU2.** Understanding of work orders and fault identification procedures.

**KU3.** Awareness of tools, equipment, and their safe usage.

**KU4.** Knowledge of maintenance standards and safety protocols.

**KU5.** Familiarity with environmental and regulatory requirements.

**KU6.** Understanding of IoT-based monitoring and fault detection apps.

**KU7.** Knowledge of approved repair and replacement methods.

**KU8.** Awareness of documentation and reporting procedures.

**KU9.** Understanding of customer service protocols and expectations.

**KU10.** Knowledge of waste disposal procedures in line with safety policies.

## Generic Skills (GS)

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

**GS1.** Ability to communicate effectively with supervisors and customers.

**GS2.** Skill in identifying and selecting appropriate tools and materials.

**GS3.** Ability to perform accurate inspection and testing of PV systems.

**GS4.** Time management skills for completing maintenance tasks efficiently.

**GS5.** Problem-solving skills to address technical faults independently.

**GS6.** Ability to follow organizational procedures and safety norms.

**GS7.** Documentation and reporting skills as per company standards.

**GS8.** Ability to handle customer queries with professionalism.

**GS9.** Team collaboration skills during fieldwork and reporting.

**GS10.** Attention to detail in maintenance, repair, and cleanliness tasks.

## Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| *Identify work requirements and prepare service kit* | **8** | **8** | **-** | **1** |
| **PC1.** coordinate with supervisor for work order to identify type of system fault from the job specifications | - | - | - | - |
| **PC2.** identify required resources, materials, tools, equipment and testing devices as per given job specification | - | - | - | - |
| **PC3.** verify that the identified tools/equipment are in working condition and safe to handle | - | - | - | - |
| **PC4.** check that the required type, quality and quantity of materials are available | - | - | - | - |
| *Perform routine maintenance work at site* | **14** | **18** | **-** | **4** |
| **PC5.** access the work site in accordance with organization’s approved procedures and state the purpose of visit | - | - | - | - |
| **PC6.** plan customer’s security coverage requirements in detail as per needs communicated | - | - | - | - |
| **PC7.** provide accurate information at all times in accordance with organizational quality Standards and procedures | - | - | - | - |
| **PC8.** inspect that circuits or machines are safely isolated as per regulatory requirements and organizational procedures | - | - | - | - |
| **PC9.** check that the identified work plan conforms to environmental, architectural, structural, site and regulatory requirements | - | - | - | - |
| **PC10.** perform washing away dust/dirt from the surface of the panels, using approved procedures and cleansing agents, to ensure panels/inverter are dust-free and moisture- free | - | - | - | - |
| **PC11.** inspect the integrated connection system for any loose wiring, connectors using approved testing procedures | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| *Identify and repair faults* | **8** | **10** | **-** | **3** |
| **PC12.** detect faults using IoT-based monitoring systems and mobile diagnostic apps in the functionality of the system using photo voltaic panel fault finding methods | - | - | - | - |
| **PC13.** repair, or replace, faulty components using approved methods without causing damage to any equipment, components, circuits, etc. | - | - | - | - |
| **PC14.** report any unprecedented problems identified in the work to responsible authority and seek advice on how to resolve them | - | - | - | - |
| *Perform post repair and maintenance activities* | **10** | **14** | **-** | **2** |
| **PC15.** perform steps to handover the completed work to the customer and demonstrate the operation of the system as per standard quality requirements | - | - | - | - |
| **PC16.** document the required information accurately after work completion as per organization’s policies & procedures | - | - | - | - |
| **PC17.** resolve customer queries, concerns and requests efficiently and accurately in line with relevant organizational customer service practices | - | - | - | - |
| **PC18.** return all used tools and equipment safely in designated storage | - | - | - | - |
| **PC19.** perform steps to dispose toxic and non-toxic waste materials as per relevant environmental safety policies | - | - | - | - |
| **NOS Total** | **40** | **50** | **-** | **10** |

**Qualification Pack**

## National Occupational Standards (NOS) Parameters

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|---|---|
| **NOS Code** | ELE/N5912 |
| **NOS Name** | Carry out maintenance and repairs on the Solar PV System |
| **Sector** | Electronics |
| **Sub-Sector** | |
| **Occupation** | Installation-S&L |
| **NSQF Level** | 4 |
| **Credits** | 7 |
| **Version** | 1.0 |
| **Last Reviewed Date** | 08/05/2025 |
| **Next Review Date** | 08/05/2028 |
| **NSQC Clearance Date** | 08/05/2025 |

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

## Description

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

## Scope

The scope covers the following :

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

## Elements and Performance Criteria

*Introduction to Employability Skills*

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

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

*Constitutional values – Citizenship*

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

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

*Becoming a Professional in the 21st Century*

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

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

*Basic English Skills*

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

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

*Communication Skills*

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

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

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

*Diversity & Inclusion*

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

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

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

*Financial and Legal Literacy*

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

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

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

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

*Essential Digital Skills*

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

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

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

*Entrepreneurship*

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

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

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

*Customer Service*

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

**PC16.** identify different types of customers

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

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

*Getting ready for apprenticeship & Jobs*

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

**PC19.** create a basic biodata

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

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

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** need for employability skills

**KU2.** various constitutional and personal values

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

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

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

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

**KU7.** inclusivity and its importance

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

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

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

## Generic Skills (GS)

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

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

## Assessment Criteria

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

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

## National Occupational Standards (NOS) Parameters

| | |
|---|---|
| **NOS Code** | DGT/VSQ/N0101 |
| **NOS Name** | Employability Skills (30 Hours) |
| **Sector** | Cross Sectoral |
| **Sub-Sector** | Professional Skills |
| **Occupation** | Employability |
| **NSQF Level** | 2 |
| **Credits** | 1 |
| **Version** | 1.0 |
| **Last Reviewed Date** | 18/02/2025 |
| **Next Review Date** | 18/02/2028 |
| **NSQC Clearance Date** | 18/02/2025 |

# Assessment Guidelines and Assessment Weightage

## Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each Element/ PC.

2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.

3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.

4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).

5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.

6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.

7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

**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 |
|---|---|---|---|---|---|---|
| ELE/N5911.Carry out the installation of the Solar PV System | 40 | 50 | - | 10 | 100 | 40 |
| ELE/N5912.Carry out maintenance and repairs on the Solar PV System | 40 | 50 | - | 10 | 100 | 40 |
| DGT/VSQ/N0101.Employability Skills (30 Hours) | 20 | 30 | - | - | 50 | 20 |
| **Total** | **100** | **130** | **-** | **20** | **250** | **100** |

## Acronyms

| | |
|---|---|
| **NOS** | National Occupational Standard(s) |
| **NSQF** | National Skills Qualifications Framework |
| **QP** | Qualifications Pack |
| **TVET** | Technical and Vocational Education and Training |
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## Glossary

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

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|---|---|
| **Knowledge and Understanding (KU)** | 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. |
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