

Qualification Pack



Solar Panel Installation Technician

QP Code: ELE/Q5901

Version: 3.0

NSQF Level: 4

Electronics Sector Skills Council of India || 155, 2nd Floor, ESC House Okhla Industrial Area-Phase 3
New Delhi- 110020 || email:ceo@essc-india.org



Qualification Pack

Contents

ELE/Q5901: Solar Panel Installation Technician	3
<i>Brief Job Description</i>	3
Applicable National Occupational Standards (NOS)	3
<i>Compulsory NOS</i>	3
<i>Qualification Pack (QP) Parameters</i>	3
ELE/N5901: Check site conditions, collect tools and raw materials	5
ELE/N5902: Install the solar panel	11
ELE/N9905: Work effectively at the workplace	20
ELE/N1002: Apply health and safety practices at the workplace	28
DGT/VSQ/N0102: Employability Skills (60 Hours)	36
Assessment Guidelines and Weightage	43
<i>Assessment Guidelines</i>	43
<i>Assessment Weightage</i>	44
Acronyms	45
Glossary	46



Qualification Pack

ELE/Q5901: Solar Panel Installation Technician

Brief Job Description

Solar Panel Installation Technician in this job checks the installation site, understands the layout requirement as per design, assesses precautionary measures to be taken, installs the solar panel as per customers requirement and ensures effective functioning of the system post installation

Personal Attributes

The individual must have: ability to work in standing position for long hours, good physical strength to handle solar panels and willingness to work in outdoor settings at varied locations such as roof tops, fields, urban or rural.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [ELE/N5901: Check site conditions, collect tools and raw materials](#)
2. [ELE/N5902: Install the solar panel](#)
3. [ELE/N9905: Work effectively at the workplace](#)
4. [ELE/N1002: Apply health and safety practices at the workplace](#)
5. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Electronics
Sub-Sector	Solar & LED
Occupation	Installation
Country	India
NSQF Level	4
Credits	20
Aligned to NCO/ISCO/ISIC Code	NCO-2015/NIL

Qualification Pack

Minimum Educational Qualification & Experience	8th grade pass with 2 years of NTC (plus 2 year of NAC/relevant experience) OR 10th grade pass (plus 2 year NTC/NAC/relevant experience) OR 12th grade Pass OR Certificate-NSQF (Level 3 in Maintenance Technician) with 2 Years of experience
Minimum Level of Education for Training in School	8th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	27/06/2025
NSQC Approval Date	27/01/2022
Version	3.0
Reference code on NQR	2022/EHW/ESSC/06654
NQR Version	1.0

Remarks:

NA

Qualification Pack

ELE/N5901: Check site conditions, collect tools and raw materials

Description

This OS unit is about assessing the conditions at site where the solar panels would be installed, understanding the customer requirement in installation and arranging the tools and raw materials required for solar panel installation

Scope

The scope covers the following :

- Identify and plan the work target
- Assessing the site condition
- Identify the installation requirement
- Collecting recommended material for installation
- Ensure proper handling and storage of material

Elements and Performance Criteria

Identify and plan the work target

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

- PC1.** interact with the supervisor to identify the installation targets for the day and/or week, individual work requirement, areas of operation
- PC2.** identify the location of installations, plan the day's activities and complete the work plan for each installation

Assessing site conditions

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

- PC3.** assess the site for identify pre-requisites for solar panel installation
- PC4.** select the type of mounting to be made such as roof top, open fields, small spaces and mounting accessories required for installation as per the site condition
- PC5.** select the place of installation where maximum period of sunlight is captured in the area
- PC6.** ensure that land is levelled for flat surface mounting and construction is strong to hold solar panel for 20-25 years, especially, on roof top
- PC7.** identify any civil construction requirements for installing the panels and inform the customer for same

Identify the installation requirement

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

- PC8.** interact with customer and understand the purpose of installation and suggest alternatives
- PC9.** obtain the location and mounting preference of customer
- PC10.** match the voltage and power output of the type of installation designed and losses with customer requirement
- PC11.** inform customer about the approximate time required for installation and any requirements during installation

Qualification Pack

PC12. get concurrence from the customer on the package of materials to be procured for installation based on agreed design

Collecting recommended material for installation

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

PC13. arrange and collect the material such as solar panels as per customers requirement, mounting stands as per design, tools and consumables required for mounting the solar panels

PC14. ensure that the quantity of modules / panels match the voltage requirement of the system

PC15. ensure that only company recommended quality materials are used unless specified by customer

PC16. ensure all the materials procured are QC passed, module is not damaged and the outer glass is not broken

Ensure proper handling and storage of material

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

PC17. identify the material handling requirement and follow the standard operating procedure while moving the material

PC18. follow the standard module handling procedure such as two people should lift a module, module should not be carried on head, etc.

PC19. cover the glass module with an opaque material in storage to ensure that there is no electricity generation before installation

PC20. ensure that modules are stored in a way that they will not get not damaged by falling or by any external disturbance

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. company policies on incentives, personnel management, code of conduct, documentation, installation, customer support etc.

KU2. company different department and concerned authority, culture and reporting structure

KU3. importance of individuals role in the work flow

KU4. basics on solar energy and power generation systems

KU5. use and handling procedure of solar panels

KU6. energy storage, control and conversion

KU7. basic electrical system and functioning

KU8. mechanical equipment and its functioning

KU9. maintenance procedure of equipment

KU10. site survey, design and evaluation of various parameters

KU11. tools involved in installation of system

KU12. how to operate/use different tools such as screw driver, inspection fixtures, wire cutter, pliers, tester, spanner, etc.

KU13. quality and process standards



Qualification Pack

- KU14.** importance of wearing protective clothing and other safety gear while carrying out installation
- KU15.** precautions to be taken while handling different electrical and mechanical products

Generic Skills (GS)

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

- GS1.** read product and equipment manuals, installation manuals, etc.
- GS2.** read warnings, instructions and other text material on product labels, components, etc.
- GS3.** fill in job completion form after installation activities have been completed
- GS4.** communicate in English and local language
- GS5.** interact with supervisor to understand the daily production target
- GS6.** interact with co-workers in order to co-ordinate work processes
- GS7.** organize work processes and reduce repetition of errors for better time management
- GS8.** plan and organize tools, machines and consumables for carrying out work effectively
- GS9.** analyse the complexity of work to determine if it can be successfully carried out or needs to be referred to a superior/specialist

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Identify and plan the work target</i>	4	6	-	-
PC1. interact with the supervisor to identify the installation targets for the day and/or week, individual work requirement, areas of operation	2	3	-	-
PC2. identify the location of installations, plan the day's activities and complete the work plan for each installation	2	3	-	-
<i>Assessing site conditions</i>	5	12	-	-
PC3. assess the site for identify pre-requisites for solar panel installation	1	3	-	-
PC4. select the type of mounting to be made such as roof top, open fields, small spaces and mounting accessories required for installation as per the site condition	1	3	-	-
PC5. select the place of installation where maximum period of sunlight is captured in the area	1	2	-	-
PC6. ensure that land is levelled for flat surface mounting and construction is strong to hold solar panel for 20-25 years, especially, on roof top	1	1	-	-
PC7. identify any civil construction requirements for installing the panels and inform the customer for same	1	3	-	-
<i>Identify the installation requirement</i>	10	14	-	-
PC8. interact with customer and understand the purpose of installation and suggest alternatives	1	3	-	-
PC9. obtain the location and mounting preference of customer	1	2	-	-
PC10. match the voltage and power output of the type of installation designed and losses with customer requirement	3	3	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. inform customer about the approximate time required for installation and any requirements during installation	2	3	-	-
PC12. get concurrence from the customer on the package of materials to be procured for installation based on agreed design	3	3	-	-
<i>Collecting recommended material for installation</i>	9	14	-	-
PC13. arrange and collect the material such as solar panels as per customers requirement, mounting stands as per design, tools and consumables required for mounting the solar panels	3	5	-	-
PC14. ensure that the quantity of modules / panels match the voltage requirement of the system	2	2	-	-
PC15. ensure that only company recommended quality materials are used unless specified by customer	2	3	-	-
PC16. ensure all the materials procured are QC passed, module is not damaged and the outer glass is not broken	2	4	-	-
<i>Ensure proper handling and storage of material</i>	7	19	-	-
PC17. identify the material handling requirement and follow the standard operating procedure while moving the material	2	5	-	-
PC18. follow the standard module handling procedure such as two people should lift a module, module should not be carried on head, etc.	2	5	-	-
PC19. cover the glass module with an opaque material in storage to ensure that there is no electricity generation before installation	2	5	-	-
PC20. ensure that modules are stored in a way that they will not get not damaged by falling or by any external disturbance	1	4	-	-
NOS Total	35	65	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N5901
NOS Name	Check site conditions, collect tools and raw materials
Sector	Electronics
Sub-Sector	Solar & LED
Occupation	Testing-S&L
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	27/01/2022
Next Review Date	27/06/2025
NSQC Clearance Date	27/01/2022

Qualification Pack

ELE/N5902: Install the solar panel

Description

This OS unit is about mounting and installing the solar panel in the customer premises. It also includes connecting the solar panels with the inverters and ensuring the functioning of solar power system.

Scope

The scope covers the following :

- Understanding installation and material usage procedure
- Assessing mounting
- Installing the panel
- Connecting the system and check for functioning
- Completing the work
- Following quality and safety procedures

Elements and Performance Criteria

Understanding installation and material usage procedure

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

- PC1.** understand the customer requirement on installation
- PC2.** ensure that all appropriate materials are available during installation time
- PC3.** ensure that the installation meets the local building rules and regulations
- PC4.** ensure to disconnect PV module from any electric sources such as batteries, inverters, etc., before working on the module
- PC5.** check that the module is defect free before installing
- PC6.** ensure to take specified measures such as fire resistance, corrosion resistance for the module during installation

Assessing mounting

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

- PC7.** understand the type of mounting and other accessories required
- PC8.** assess the degree of inclination and angle of tilt of PV module for the specific area, locality or region to enable the system absorb maximum annual sunlight
- PC9.** ensure that sunlight falls perpendicular to the PV module to absorb maximum energy
- PC10.** ensure that panels are mounted in a place where there is no shade at any time of the year
- PC11.** ensure that mounting is strong to withstand wind, rain, etc.
- PC12.** ensure that any special construction requirement for mounting is done by following acceptable quality standards, especially, in rooftop installations
- PC13.** use approved tools for mounting
- PC14.** set the mounting fixture firmly at the desired location

Installing the panel

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

Qualification Pack

- PC15.** remove packaging of the solar panel carefully
- PC16.** handle the panels carefully without damaging the material
- PC17.** take safety measures and wear protection gear such as gloves to avoid shock / injuries while handling modules
- PC18.** cover the module with opaque material while installing to avoid any current generation
- PC19.** ensure that junction box is covered
- PC20.** do not disturb or disassemble any part of the module part during installation
- PC21.** take necessary precautions for fire resistance of modules
- PC22.** use recommended material of solar cable and plugs for electrical connection
- PC23.** install spare fuse to avoid any short circuits as per company policy
- PC24.** mount the module on the fixture with the mounting rails using bolts and nuts
- PC25.** ensure that the panels are mounted firmly

Connecting the system and check for functioning

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

- PC26.** use the recommended cables to connect multiple PV modules in combination to generate the desired voltage and current
- PC27.** choose type of connection, i.e., series or parallel, as per design
- PC28.** check the maximum system voltage as per the installation and follow adjustment measures accordingly to match output requirement
- PC29.** ensure that the modules are grounded as specified
- PC30.** connect the system and check its functioning
- PC31.** escalate for any issues faced during the functioning of the system

Completing the work

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

- PC32.** remove all the tools, consumables used and clean the work area after completing the installation activity
- PC33.** fill in the job completion form and get the signature of the customer
- PC34.** inform customers about maintenance of solar panels and procedure of solar panels cleaning
- PC35.** follow company standards in documentation of installation activities performed

Following quality and safety procedures

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

- PC36.** remove any metals or jewellery to avoid possibility of current shock during installation activity
- PC37.** wear all safety gears such as work shoes, cotton gloves, goggles while carrying out installation activities
- PC38.** take specified precautionary measures while handling electrical system
- PC39.** keep work area clean and organised
- PC40.** adhere to relevant health and safety standards
- PC41.** dispose-off any waste materials in accordance with safe working practices and procedures

Knowledge and Understanding (KU)

Qualification Pack

The individual on the job needs to know and understand:

- KU1.** companys policies on: incentives, personnel management
- KU2.** companys code of conduct
- KU3.** importance of individuals role in the work flow
- KU4.** organisation culture
- KU5.** companys reporting structure
- KU6.** companys documentation policy
- KU7.** companys different department and concerned authority
- KU8.** companys installation policy
- KU9.** companys customer support policy
- KU10.** basics on solar energy system and power generation
- KU11.** solar energy system components such as panels, batteries, charge controllers, inverters
- KU12.** significance of volts, amps and watts: series and parallel connection
- KU13.** handling procedure for solar panels
- KU14.** energy storage, control and conversion
- KU15.** basic electrical system and functioning
- KU16.** mechanical equipment and their functioning
- KU17.** maintenance procedure of equipment
- KU18.** voltage requirement of various equipment
- KU19.** panel mounting and inclination and angle of tilt
- KU20.** placement of solar panel mounting
- KU21.** sunlight and direction assessment
- KU22.** site surveying methods and evaluation parameters
- KU23.** tools involved in installation of system
- KU24.** basic electrical engineering and circuitry
- KU25.** quality and process standards
- KU26.** occupational health and safety standards and waste management procedures
- KU27.** importance of wearing protective clothing and other safety gear while carrying out installation activities
- KU28.** precautions to be taken while handling different electrical and mechanical products

Generic Skills (GS)

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

- GS1.** read product and equipment manuals, installation manual, maintenance reports etc.
- GS2.** read warnings, instructions and other text material on product labels, components etc.
- GS3.** fill in job completion form after installation activity is completed
- GS4.** how to operate/use screw driver, inspection fixtures, wire cutter, pliers, tester, spanner, etc.
- GS5.** how to use tools for panel mounting



Qualification Pack

- GS6.** how to interact with co workers in order to co ordinate work processes
- GS7.** how to interact with supervisor to understand the daily target
- GS8.** to improve work processes
- GS9.** to reduce repetition of errors
- GS10.** how to report potential areas of disruptions to work process
- GS11.** when to report to supervisor and when to deal with a colleague depending on the type of concern

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Understanding installation and material usage procedure</i>	4	11	-	-
PC1. understand the customer requirement on installation	1	1	-	-
PC2. ensure that all appropriate materials are available during installation time	1	1	-	-
PC3. ensure that the installation meets the local building rules and regulations	-	2	-	-
PC4. ensure to disconnect PV module from any electric sources such as batteries, inverters, etc., before working on the module	1	2	-	-
PC5. check that the module is defect free before installing	1	2	-	-
PC6. ensure to take specified measures such as fire resistance, corrosion resistance for the module during installation	-	3	-	-
<i>Assessing mounting</i>	7	13	-	-
PC7. understand the type of mounting and other accessories required	1	2	-	-
PC8. assess the degree of inclination and angle of tilt of PV module for the specific area, locality or region to enable the system absorb maximum annual sunlight	2	2	-	-
PC9. ensure that sunlight falls perpendicular to the PV module to absorb maximum energy	1	2	-	-
PC10. ensure that panels are mounted in a place where there is no shade at any time of the year	-	2	-	-
PC11. ensure that mounting is strong to withstand wind, rain, etc.	1	1	-	-
PC12. ensure that any special construction requirement for mounting is done by following acceptable quality standards, especially, in rooftop installations	1	1	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. use approved tools for mounting	1	1	-	-
PC14. set the mounting fixture firmly at the desired location	-	2	-	-
<i>Installing the panel</i>	8	17	-	-
PC15. remove packaging of the solar panel carefully	1	1	-	-
PC16. handle the panels carefully without damaging the material	1	2	-	-
PC17. take safety measures and wear protection gear such as gloves to avoid shock / injuries while handling modules	1	2	-	-
PC18. cover the module with opaque material while installing to avoid any current generation	1	2	-	-
PC19. ensure that junction box is covered	1	2	-	-
PC20. do not disturb or disassemble any part of the module part during installation	-	2	-	-
PC21. take necessary precautions for fire resistance of modules	-	2	-	-
PC22. use recommended material of solar cable and plugs for electrical connection	1	1	-	-
PC23. install spare fuse to avoid any short circuits as per company policy	1	1	-	-
PC24. mount the module on the fixture with the mounting rails using bolts and nuts	1	1	-	-
PC25. ensure that the panels are mounted firmly	-	1	-	-
<i>Connecting the system and check for functioning</i>	7	10	-	-
PC26. use the recommended cables to connect multiple PV modules in combination to generate the desired voltage and current	1	1	-	-
PC27. choose type of connection, i.e., series or parallel, as per design	1	3	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC28. check the maximum system voltage as per the installation and follow adjustment measures accordingly to match output requirement	1	1	-	-
PC29. ensure that the modules are grounded as specified	2	2	-	-
PC30. connect the system and check its functioning	1	1	-	-
PC31. escalate for any issues faced during the functioning of the system	1	2	-	-
<i>Completing the work</i>	5	5	-	-
PC32. remove all the tools, consumables used and clean the work area after completing the installation activity	1	2	-	-
PC33. fill in the job completion form and get the signature of the customer	-	1	-	-
PC34. inform customers about maintenance of solar panels and procedure of solar panels cleaning	1	1	-	-
PC35. follow company standards in documentation of installation activities performed	3	1	-	-
<i>Following quality and safety procedures</i>	4	9	-	-
PC36. remove any metals or jewellery to avoid possibility of current shock during installation activity	1	2	-	-
PC37. wear all safety gears such as work shoes, cotton gloves, goggles while carrying out installation activities	1	2	-	-
PC38. take specified precautionary measures while handling electrical system	-	2	-	-
PC39. keep work area clean and organised	1	2	-	-
PC40. adhere to relevant health and safety standards	-	1	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC41. dispose-off any waste materials in accordance with safe working practices and procedures	1	-	-	-
NOS Total	35	65	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N5902
NOS Name	Install the solar panel
Sector	Electronics
Sub-Sector	Solar & LED
Occupation	Installation
NSQF Level	4
Credits	TBD
Version	3.0
Last Reviewed Date	27/01/2022
Next Review Date	19/07/2023
NSQC Clearance Date	19/01/2023

Qualification Pack

ELE/N9905: Work effectively at the workplace

Description

This unit is about the communicating and managing work effectively at the workplace as well as taking measures to enhance own competence and working in a disciplined and ethical manner.

Scope

The scope covers the following :

- Communicate effectively at the workplace
- Work effectively
- Maintain and enhance professional competence
- Work in a disciplined and ethical manner
- Uphold social diversity at the workplace

Elements and Performance Criteria

Communicate effectively at the workplace

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

- PC1.** exchange information and instruction with colleagues, and seek clarifications and feedback as necessary
- PC2.** assist colleagues where required
- PC3.** follow business communication etiquette in all interactions and communicative formats (online, digital, and in-person)
- PC4.** document and share all relevant information with stakeholders in agreed formats and as per agreed timelines

Work effectively

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

- PC5.** identify and obtain clarity regarding organisational, team and own goals and targets
- PC6.** prioritise and plan work in order to achieve goals and targets
- PC7.** monitor own and team performance as per agreed plan
- PC8.** complete duties accurately, systematically and within required timeframes
- PC9.** express emotions appropriately at the workplace and manage own response to heightened emotions
- PC10.** maintain orderliness and cleanliness in the work area

Maintain and enhance professional competence

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

- PC11.** identify own strengths and weaknesses in relation to goals and targets
- PC12.** adapt self, service, or product to meet success criteria
- PC13.** seek and select opportunities for continuous professional development
- PC14.** formulate a professional development plan to enhance capabilities

Qualification Pack

- PC15.** build or contribute to the organizational knowledge base of cases, clients, issues, solutions, and innovations
- PC16.** examine developments and trends in field of work and their potential impact on work
- PC17.** take feedback from peers, supervisors and clients to improve own performance and practices

Work in a disciplined and ethical manner

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

- PC18.** perform tasks as per workplace standards, organisational policies and legislative requirements
- PC19.** display appropriate professional appearance at the workplace and adhere to the organisational dress code
- PC20.** demonstrate responsible and disciplined behaviour at the workplace such as punctuality; completing tasks as per given time and standards; demonstrating professional behaviour at all times, adopting environment- friendly practices, etc.
- PC21.** identify the cause of conflict and options for resolution with peers or escalate grievances and problems to appropriate authority as per procedure for conflict resolution
- PC22.** protect the rights of the client and organisation when delivering services
- PC23.** ensure services are delivered equally to all clients regardless of personal and cultural beliefs
- PC24.** operate within an agreed ethical code of practice and report unethical conduct to the appropriate authorities
- PC25.** follow organisational guidelines and legal requirements on disclosure and confidentiality

Uphold social diversity at the workplace

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

- PC26.** recognize and evaluate biased practices against underrepresented groups like women and persons with disabilities, in workplace systems and processes
- PC27.** identify and report discrimination and harassment based on gender, disability, or cultural difference at the workplace
- PC28.** use inclusive or neutral language and gestures in all interactions
- PC29.** respect the personal and professional space of others
- PC30.** access grievance redressal mechanisms as per legislations

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organisation's policies on dress code, workplace timings, workplace behaviour, performance management, incentives, delivery standards, information security, etc.
- KU2.** organizational hierarchy and escalation matrix
- KU3.** importance of the individual's role in the workflow
- KU4.** organisational norms on health, safety and sustainability
- KU5.** work area inspection procedures and practices
- KU6.** professional etiquette and grooming



Qualification Pack

- KU7.** communication etiquette across communicative mediums (online, digital, and in-person) including strategies/methods for sharing information, documentation, and providing and receiving feedback
- KU8.** importance of self-evaluations and developing a continuous learning and professional development plan
- KU9.** developments and trends impacting professional practice
- KU10.** importance of taking and using feedback from colleagues and clients to identify and introduce improvements in work performance
- KU11.** professional ethics and workplace norms on reporting and/or penalizing unethical behaviour and practices.
- KU12.** guidelines and legal requirements on disclosure, confidentiality, and conflicts of interest
- KU13.** strategies for collaboration with colleagues and clients.
- KU14.** professional responses and strategies against inappropriate language or behaviour toward self and others
- KU15.** Implicit bias (based on gender, disability, class, caste, colour, race, culture, religion, etc.) and its consequences in the workplace
- KU16.** organizational guidelines, prevalent legislations and accessibility norms and processes to support PwDs at the workplace
- KU17.** strategies for time, effort and resource allocation towards the goals.
- KU18.** basic concepts of work productivity including waste reduction, efficient material usage and optimization of time

Generic Skills (GS)

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

- GS1.** complete documentation and forms such as work orders, invoices maintenance records activity logs, attendance sheets as per organizational format in English and/or local language
- GS2.** write basic accident or incident report accurately in an appropriate format
- GS3.** read warnings, instructions and other text material on product labels, components, etc. and relevant signages, warnings, labels or descriptions on equipment, etc. while carrying out work activities
- GS4.** convey and share technical information clearly using appropriate language
- GS5.** clarify task-related information
- GS6.** liaise with authorities and supervisors as per organizational protocol
- GS7.** listen, speak, and write in an inclusive, respectful manner in line with organizational protocol
- GS8.** seek clarification from immediate supervisor or responsible authority or exercise most appropriate solutions to safety breaches at work
- GS9.** report to the supervisor and when to deal with a colleague depending on the type of concern
- GS10.** deliver product to next work process on time
- GS11.** improve work process and report potential areas of delays and disruptions
- GS12.** communicate problems appropriately to others
- GS13.** identify symptoms of the fault to the cause of the problem and resolve, otherwise seek assistance and support from other sources to solve the problem



Qualification Pack

- GS14.** anticipate and avoid hazards that may occur during repairs because of tools, materials used or repair processes
- GS15.** complete tasks efficiently and accurately within stipulated time
- GS16.** appreciate and respect social diversity in all professional settings
- GS17.** develop awareness and accountability for perspectives on gender, disabilities, and socio-cultural issues leading to discrimination, bias, or harassment at the workplace
- GS18.** maintain positive and effective relationships with colleagues and customers

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Communicate effectively at the workplace</i>	5	13	-	-
PC1. exchange information and instruction with colleagues, and seek clarifications and feedback as necessary	1	3	-	-
PC2. assist colleagues where required	1	3	-	-
PC3. follow business communication etiquette in all interactions and communicative formats (online, digital, and in-person)	1	4	-	-
PC4. document and share all relevant information with stakeholders in agreed formats and as per agreed timelines	2	3	-	-
<i>Work effectively</i>	6	13	-	-
PC5. identify and obtain clarity regarding organisational, team and own goals and targets	1	2	-	-
PC6. prioritise and plan work in order to achieve goals and targets	1	2	-	-
PC7. monitor own and team performance as per agreed plan	1	2	-	-
PC8. complete duties accurately, systematically and within required timeframes	1	2	-	-
PC9. express emotions appropriately at the workplace and manage own response to heightened emotions	1	2	-	-
PC10. maintain orderliness and cleanliness in the work area	1	3	-	-
<i>Maintain and enhance professional competence</i>	8	7	-	-
PC11. identify own strengths and weaknesses in relation to goals and targets	1	1	-	-
PC12. adapt self, service, or product to meet success criteria	1	1	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. seek and select opportunities for continuous professional development	1	1	-	-
PC14. formulate a professional development plan to enhance capabilities	2	1	-	-
PC15. build or contribute to the organizational knowledge base of cases, clients, issues, solutions, and innovations	1	1	-	-
PC16. examine developments and trends in field of work and their potential impact on work	1	1	-	-
PC17. take feedback from peers, supervisors and clients to improve own performance and practices	1	1	-	-
<i>Work in a disciplined and ethical manner</i>	11	16	-	-
PC18. perform tasks as per workplace standards, organisational policies and legislative requirements	2	2	-	-
PC19. display appropriate professional appearance at the workplace and adhere to the organisational dress code	1	2	-	-
PC20. demonstrate responsible and disciplined behaviour at the workplace such as punctuality; completing tasks as per given time and standards; demonstrating professional behaviour at all times, adopting environment- friendly practices, etc.	1	2	-	-
PC21. identify the cause of conflict and options for resolution with peers or escalate grievances and problems to appropriate authority as per procedure for conflict resolution	2	2	-	-
PC22. protect the rights of the client and organisation when delivering services	1	2	-	-
PC23. ensure services are delivered equally to all clients regardless of personal and cultural beliefs	1	2	-	-
PC24. operate within an agreed ethical code of practice and report unethical conduct to the appropriate authorities	2	2	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC25. follow organisational guidelines and legal requirements on disclosure and confidentiality	1	2	-	-
<i>Uphold social diversity at the workplace</i>	10	11	-	-
PC26. recognize and evaluate biased practices against underrepresented groups like women and persons with disabilities, in workplace systems and processes	2	2	-	-
PC27. identify and report discrimination and harassment based on gender, disability, or cultural difference at the workplace	2	2	-	-
PC28. use inclusive or neutral language and gestures in all interactions	2	2	-	-
PC29. respect the personal and professional space of others	2	2	-	-
PC30. access grievance redressal mechanisms as per legislations	2	3	-	-
NOS Total	40	60	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N9905
NOS Name	Work effectively at the workplace
Sector	Electronics
Sub-Sector	Generic
Occupation	Generic - Organizational Behaviour
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	24/02/2022
Next Review Date	30/12/2026
NSQF Clearance Date	30/12/2021

Qualification Pack

ELE/N1002: Apply health and safety practices at the workplace

Description

This OS unit is about knowledge and practices relating to health, safety and security that candidates need to use in the workplace.

Scope

The scope covers the following :

- Deal with workplace hazards
- Apply fire safety practices
- Follow emergencies, rescue and first-aid procedures
- Effective waste management/recycling practices

Elements and Performance Criteria

Deal with workplace hazards

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

- PC1.** identify job-site hazards and possible causes of accident in the workplace
- PC2.** perform work complying to organizational safe working practices and observing hazard signs displayed on containers, equipment and in various work areas such as inside buildings, in open areas and public spaces, etc.
- PC3.** use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards
- PC4.** follow standard safety procedures while handling tool/ ,equipment, hazardous substances and while working in hazardous environments
- PC5.** dispose electronic waste (such as toxins; metals such as lead, cadmium, barium; flame retardant plastics, welding slag etc.) as per industry approved techniques
- PC6.** avoid damage of components due to negligence in electrostatic discharge (ESD) procedures
- PC7.** locate general health and safety equipment in the workplace such as fire extinguishers; first aid equipment; safety instruments, clothing and installations (fire exits, exhaust fans)
- PC8.** maintain appropriate posture while handling heavy objects
- PC9.** apply good housekeeping practices at all times

Apply fire safety practices

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

- PC10.** take preventive measures to prevent fire hazards
- PC11.**
 - use appropriate fire extinguishers for different types of fires
 - Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. (These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no l
- PC12.** exhibit rescue and first-aid techniques in case of fire or electrocution

Qualification Pack

Follow emergencies, rescue and first-aid procedures

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

- PC13.** administer appropriate first aid to victims in case of bleeding, burns, choking, electric shock, poisoning etc.
- PC14.** administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock,
- PC15.** participate regularly in emergency procedures such as raising alarm, safe/efficient, evacuation, correct means of taking shelter and escaping, correct assembly point, roll call, correct return to work
- PC16.** use correct method to move injured people and others during an emergency

Effective waste management/recycling practices

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

- PC17.** identify recyclable and non-recyclable, and hazardous waste generated
- PC18.** segregate waste into different categories
- PC19.** ensure disposal of non-recyclable waste appropriately
- PC20.** deposit non-recyclable and reusable material at identified location
- PC21.** follow processes specified for disposal of hazardous waste

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** importance of working in clean and safe work environment following safety practices and procedures
- KU2.** health and safety roles and responsibilities of relevant personnel within and outside the organisation
- KU3.** key internal and external sources of health and safety information
- KU4.** basic knowledge of electronic devices and related health risks
- KU5.** meaning of hazards and risks
- KU6.** various types of health and safety hazards commonly present in the work environment such as physical hazards, electrical hazards, chemical hazards, fire hazards, equipment related hazards, health hazards, etc.
- KU7.** methods of accident prevention
- KU8.** importance of using protective clothing/equipment while working
- KU9.** general principles for identifying and controlling health and safety risks
- KU10.** main hazards and preventive as well as control measures while working with different types of equipment
- KU11.** importance of carrying out electrical and non-electrical isolation to prevent hazards from loss of machine/system/process control
- KU12.** main hazards and preventive as well as control measures when working with electrical systems or using electrical equipment
- KU13.** forms and classifications of hazardous substances
- KU14.** safe working practices while working at various hazardous sites
- KU15.** prevention and control measures to reduce risks from exposure to hazardous substances

Qualification Pack

- KU16.** health effects associated with exposure to noise and vibration and the appropriate control measures
- KU17.** precautionary activities to prevent the fire accident
- KU18.** various causes of fire such as heating of metal, spontaneous ignition, sparking, electrical eating, loose fires (smoking, welding, etc.) chemical fires etc.
- KU19.** techniques of using the different fire extinguishers
- KU20.** different methods and material to extinguish fires
- KU21.** different materials used for extinguishing fire such as sand, water, foam, CO₂, dry powder
- KU22.** rescue techniques used during a fire hazard
- KU23.** various types of safety signs and their meaning
- KU24.** basic first aid treatment relevant to the common work place injuries e.g. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries
- KU25.** contents of written accident report
- KU26.** potential injuries and ill health associated with incorrect handling of tools and equipment
- KU27.** safe lifting and carrying practices
- KU28.** potential impact to a person who is moved incorrectly
- KU29.** personal safety, health and dignity issues relating to the movement of a person by others
- KU30.** ESD measures and 5S
- KU31.** efficient utilization and management of material and water
- KU32.** ways to recognize common electrical problems and practices of conserving electricity
- KU33.** usage of different colours of dustbins, categorization of waste into dry, wet, recyclable, nonrecyclable and items of single-use plastics
- KU34.** organization's procedure for minimizing waste
- KU35.** waste management and methods of waste disposal
- KU36.** common sources of pollution and ways to minimize it
- KU37.** names, contact information and location of people responsible for health and safety in the workplace
- KU38.** location of documents and equipment for health and safety compliance/practices in the workplace
- KU39.** safety notices, signs and instructions at workplace

Generic Skills (GS)

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

- GS1.** interpret general health and safety guidelines labels, charts, signages
- GS2.** read operation manuals
- GS3.** write health and safety compliance report
- GS4.** write an accident/incident report in local language or English
- GS5.** provide an emergency or safety incident brief to seniors or relevant authorities in a calm, clear and to-the-point manner
- GS6.** communicate general health and safety guidelines to colleagues/co-workers



Qualification Pack

- GS7.** communicate appropriately with co-workers in order to clarify instructions and other issues
- GS8.** act in case of any potential hazards observed in the work place
- GS9.** plan and organize their own work schedule, work area, tools, equipment in compliance with organizational policies for health, safety and security
- GS10.** take adequate measures to ensure the safety of clients and visitors at the workplace
- GS11.** identify immediate or temporary solutions to resolve delays
- GS12.** evaluate the work area for health and safety risks or hazards
- GS13.** use cause and effect relations to anticipate potential issues, problems and their solution in the work area related to safety
- GS14.** recognise emergency and potential emergency situations
- GS15.** protect self and others from a health and safety risk or hazard
- GS16.** communicate and collaborate to incorporate sustainable practices (greening) in workplace processes
- GS17.** record data on waste disposal at workplace

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Deal with workplace hazards</i>	20	31	-	-
PC1. identify job-site hazards and possible causes of accident in the workplace	2	3	-	-
PC2. perform work complying to organizational safe working practices and observing hazard signs displayed on containers, equipment and in various work areas such as inside buildings, in open areas and public spaces, etc.	3	4	-	-
PC3. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	3	4	-	-
PC4. follow standard safety procedures while handling tool/ ,equipment, hazardous substances and while working in hazardous environments	3	4	-	-
PC5. dispose electronic waste (such as toxins; metals such as lead, cadmium, barium; flame retardant plastics, welding slag etc.) as per industry approved techniques	2	4	-	-
PC6. avoid damage of components due to negligence in electrostatic discharge (ESD) procedures	2	3	-	-
PC7. locate general health and safety equipment in the workplace such as fire extinguishers; first aid equipment; safety instruments, clothing and installations (fire exits, exhaust fans)	2	3	-	-
PC8. maintain appropriate posture while handling heavy objects	1	3	-	-
PC9. apply good housekeeping practices at all times	2	3	-	-
<i>Apply fire safety practices</i>	4	9	-	-
PC10. take preventive measures to prevent fire hazards	2	3	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<p>PC11.</p> <ul style="list-style-type: none"> • use appropriate fire extinguishers for different types of fires • Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. (These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no l 	1	3	-	-
<p>PC12. exhibit rescue and first-aid techniques in case of fire or electrocution</p>	1	3	-	-
<p><i>Follow emergencies, rescue and first-aid procedures</i></p>	6	13	-	-
<p>PC13. administer appropriate first aid to victims in case of bleeding, burns, choking, electric shock, poisoning etc.</p>	1	3	-	-
<p>PC14. administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock,</p>	1	2	-	-
<p>PC15. participate regularly in emergency procedures such as raising alarm, safe/efficient, evacuation, correct means of taking shelter and escaping, correct assembly point, roll call, correct return to work</p>	2	4	-	-
<p>PC16. use correct method to move injured people and others during an emergency</p>	2	4	-	-
<p><i>Effective waste management/recycling practices</i></p>	5	12	-	-
<p>PC17. identify recyclable and non-recyclable, and hazardous waste generated</p>	1	3	-	-
<p>PC18. segregate waste into different categories</p>	1	2	-	-
<p>PC19. ensure disposal of non-recyclable waste appropriately</p>	1	2	-	-
<p>PC20. deposit non-recyclable and reusable material at identified location</p>	1	3	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC21. follow processes specified for disposal of hazardous waste	1	2	-	-
NOS Total	35	65	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N1002
NOS Name	Apply health and safety practices at the workplace
Sector	Electronics
Sub-Sector	Generic
Occupation	Generic - Health Safety
NSQF Level	4
Credits	TBD
Version	3.0
Last Reviewed Date	24/02/2022
Next Review Date	30/12/2026
NSQC Clearance Date	30/12/2021

Qualification Pack

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:

Qualification Pack

- 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.

Qualification Pack

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



Qualification Pack

- 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

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values - Citizenship</i>	1	1	-	-
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	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	2	4	-	-
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	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
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	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	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	-	-	-	-
<i>Diversity & Inclusion</i>	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	2	3	-	-
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	-	-	-	-
<i>Essential Digital Skills</i>	3	4	-	-
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	-	-	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Entrepreneurship</i>	2	3	-	-
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	-	-	-	-
<i>Customer Service</i>	1	2	-	-
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	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
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	-	-	-	-
NOS Total	20	30	-	-

Qualification Pack

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	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the 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 centre (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criterion.
6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.



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/N5901.Check site conditions, collect tools and raw materials	35	65	-	-	100	25
ELE/N5902.Install the solar panel	35	65	-	-	100	35
ELE/N9905.Work effectively at the workplace	40	60	-	-	100	15
ELE/N1002.Apply health and safety practices at the workplace	35	65	-	-	100	15
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	10
Total	165	285	-	-	450	100



Qualification Pack

Acronyms

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

Qualification Pack

Glossary

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

Qualification Pack

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.