

Qualification Pack



Solar Lighting Assembler

QP Code: SGJ/Q0201

Version: 4.0

NSQF Level: 4

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SGJ/Q0201: Solar Lighting Assembler

Brief Job Description

Solar Lighting Assembler assembles, tests and repairs different types of solar photovoltaic (SPV) lamps adhering to basic electrical and safety standards

Personal Attributes

This job requires the individual to concentrate on the job at hand and perform it with precision. So working with focused attention is the desired attribute of the individual performing this role. He/she must also demonstrate working in a team, ability to communicate courteously with co-workers and must be good with following instructions of the supervisor.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [SGJ/N0201: Assembly of different types of solar lamp](#)
2. [SGJ/N0202: Repair solar lamps](#)
3. [SGJ/N0106: Maintain Personal Health & Safety at project site](#)
4. [SGJ/N0203: Assemble and repair solar home lighting](#)
5. [SGJ/N0204: Assemble and repair solar street lights](#)
6. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Green Jobs
Sub-Sector	Renewable Energy
Occupation	Electrician, General
Country	India
NSQF Level	4
Credits	15

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Aligned to NCO/ISCO/ISIC Code	NCO-2015/7411.0100
Minimum Educational Qualification & Experience	12th grade Pass (with science or equivalent) OR 10th grade pass (with 2 years of any combination of NTC/NAC/CITS or equivalent in relevant trade) with NA of experience OR 10th grade pass with 3 Years of experience Renewable energy/power sector/light assembling OR Previous relevant Qualification of NSQF Level (3.5) OR Previous relevant Qualification of NSQF Level (3) with 3 Years of experience experience in Renewable energy/power sector/light assembling
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	29/05/2027
NSQC Approval Date	30/05/2024
Version	4.0
Reference code on NQR	QG-04-ES-02630-2024-V2-SCGJ
NQR Version	2

Remarks:

Total 450 Notional hours i.e. 15 Credits (Theory : 180 + Practical : 180 hours + OJT : 90)

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SGJ/N0201: Assembly of different types of solar lamp

Description

This unit provides an overview on importance and the need of Clean Energy for Lighting, basics of solar energy along with various fundamental concepts in electrical energy supported with calculations, various tools and tackles used in solar home lighting assembly, understanding the components of a Solar PV home lighting system along with how to assemble different types of solar lamps

Scope

The scope covers the following :

- Assembly of different types of solar lamp

Elements and Performance Criteria

Introduction to role of Solar lighting assembly

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

- PC1.** provide introduction to the program and discuss the job description
- PC2.** discuss the importance and the need of clean energy for lighting
- PC3.** illustrate the importance of the job role and outline future career options
- PC4.** show how small solar lighting system are useful for the overall health and development of communities
- PC5.** illustrate key components of a small solar lighting system and outline their functions
- PC6.** demonstrate the working of a solar dc system through various charts, model, video etc.
- PC7.** explain and show how to acquire basic skills of communication; along with skills for working effectively with others while respecting gender and disability concerns
- PC8.** show how to promote a safe and interactive environment at work
- PC9.** discuss how to promote a safe and interactive environment

Basic electrical concepts and introduction to solar energy

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

- PC10.** explain the basics of electricity
- PC11.** explain basics of electrical circuit
- PC12.** perform simple calculations to illustrate the fundamental concepts of power and energy.
- PC13.** analyze the use and importance of sunlight
- PC14.** demonstrate uses of sunlight in various solar applications
- PC15.** provide introduction to luminance meter and demonstrate the importance of luminous intensity.
- PC16.** Identify the importance of Measurement of Solar irradiation
- PC17.** explain the importance of measuring luminous intensity of lighting product (home light system)

Tools and tackles

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

- PC18.** introduction to electric tool kit
- PC19.** discuss the key tools and tackles required for assembly and repair of concerned system.
- PC20.** show the use of all tools and tackles required for assembly and repair of concerned system.
- PC21.** demonstrate working with a screw driver
- PC22.** discuss about soldering and soldering iron
- PC23.** demonstrate cable/wire cutting practices
- PC24.** demonstrate how to work with an electric tool kit
- PC25.** demonstrate how to use soldering iron and how to do proper soldering
- PC26.** demonstrate how to use crimping tool.
- PC27.** explain various safety precautions in using tools and tackles
- PC28.** explain about lugs crimping tool
- PC29.** introduction to screw driver

Solar PV lighting system and its components

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

- PC30.** explain the components of a solar pv home lighting system
- PC31.** discuss how to use a multimeter
- PC32.** demonstrate how to perform other technical testing of solar home lighting system components
- PC33.** demonstrate how a solar panel operates and show how to measure basic parameters like current and voltage
- PC34.** explain the effect of shadow on solar module
- PC35.** discuss the working of led bulbs
- PC36.** explain application of multimeter technical testing
- PC37.** explain how a solar panel operates and measure basic parameters like current and voltage
- PC38.** demonstrate the components of a solar pv home lighting system.
- PC39.** demonstrate uses of multimeter
- PC40.** demonstrate the effect of shadow on solar module
- PC41.** demonstrate the working of led bulbs

Assembly of different types of solar lamp

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

- PC42.** explain how to identify various types of solar lamps
- PC43.** verify physical properties of all the lamp components.
- PC44.** explain how to measure basic electrical parameters like resistance, current and voltage of different solar lamp, electrical components
- PC45.** demonstrate how to test the battery voltage.
- PC46.** perform step by step procedure to assemble a solar lamp
- PC47.** show how to perform a continuity check of the load wire to check for any internal breakage
- PC48.** discuss to verify the pcb and led as per technical specifications mentioned by the manufacturer.

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- PC49.** explain how to test the solar panel to check if the voltage at open circuit (voc) and current at short circuit (isc) are according to the specifications mentioned by the manufacturer
- PC50.** explain how to test the battery to check if its voltage is within the range specified by the manufacturer
- PC51.** explain how to perform a continuity check of the load wire to check for any internal breakage
- PC52.** discuss the use of various sensor for turn on and turn off the lamp (eg. dusk to down)
- PC53.** demonstrate various types of solar lamps
- PC54.** demonstrate how to measure basic electrical parameter of resistance, current and voltage.
- PC55.** show how to test the solar panel to check if the voltage at open circuit (voc) and current at short circuit (isc) are according to the specifications mentioned by the manufacturer
- PC56.** demonstrate how to place solar facing towards south for getting maximum radiation to get battery charged

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the concept of the entire project
- KU2.** the entire assembly and distribution process
- KU3.** must be well versed with the assembly timeline
- KU4.** time management concepts including discipline, punctuality, act in time on commitment and quality productive time
- KU5.** natural resources of energy
- KU6.** voltage, current and resistance
- KU7.** characteristics & specifications of battery, solar module, PCB (Printed Circuit Board), LED (Light Emitting Diode) load wire and other components of a solar lamp as per the manufacturer
- KU8.** operating and working of a multimeter, soldering iron and other tools present in a tool kit
- KU9.** preliminary concepts of solar pv system
- KU10.** complete assembly of a solar lamp as per manufacturer
- KU11.** warranties of different components of solar lamp
- KU12.** ability to shape and direct working/process methods according to self-defined criteria and effective management techniques
- KU13.** standard operating procedures for carrying out visual inspection of solar lamp
- KU14.** testing procedure for verifying the performance of all the components of a solar lamp
- KU15.** structure of a basic repair and maintenance report
- KU16.** organizations procedures for minimizing waste
- KU17.** efficient and inefficient utilization of material and water
- KU18.** basics of electricity and prevalent energy efficient devices
- KU19.** ways to recognize common electrical problems
- KU20.** common practices of conserving electricity
- KU21.** verify the PCB and LED as per technical specifications mentioned by the manufacturer

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KU22. Safety Precautions in using tools and tackles.

Generic Skills (GS)

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

- GS1.** prepare and maintain documentation
- GS2.** read and Understand assembly and distribution training manuals in English/Hindi/vernacular language
- GS3.** speak vernacular/local language
- GS4.** read user manuals and safety instructions
- GS5.** express statements or information clearly so that others can hear and understand
- GS6.** participate in and understand general discussions
- GS7.** respond appropriately to any queries
- GS8.** communicate with other employees in the organization
- GS9.** follow organization based decision making process
- GS10.** plan and organise work schedule to meet deadlines
- GS11.** work constructively with others
- GS12.** adhere to organisation code of contact
- GS13.** recognise problems and search for solutions
- GS14.** choose the best methods to complete assigned tasks
- GS15.** reduce repetition of errors
- GS16.** develop empathy across genders and towards PwD

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to role of Solar lighting assembly</i>	9	15	-	-
PC1. provide introduction to the program and discuss the job description	2	-	-	-
PC2. discuss the importance and the need of clean energy for lighting	2	-	-	-
PC3. illustrate the importance of the job role and outline future career options	-	3	-	-
PC4. show how small solar lighting system are useful for the overall health and development of communities	-	3	-	-
PC5. illustrate key components of a small solar lighting system and outline their functions	-	2	-	-
PC6. demonstrate the working of a solar dc system through various charts, model, video etc.	-	2	-	-
PC7. explain and show how to acquire basic skills of communication; along with skills for working effectively with others while respecting gender and disability concerns	2	2	-	-
PC8. show how to promote a safe and interactive environment at work	-	3	-	-
PC9. discuss how to promote a safe and interactive environment	3	-	-	-
<i>Basic electrical concepts and introduction to solar energy</i>	11	9	-	-
PC10. explain the basics of electricity	2	-	-	-
PC11. explain basics of electrical circuit	2	-	-	-
PC12. perform simple calculations to illustrate the fundamental concepts of power and energy.	-	2	-	-
PC13. analyze the use and importance of sunlight	-	2	-	-
PC14. demonstrate uses of sunlight in various solar applications	-	3	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. provide introduction to luminance meter and demonstrate the importance of luminous intensity.	2	2	-	-
PC16. Identify the importance of Measurement of Solar irradiation	2	-	-	-
PC17. explain the importance of measuring luminous intensity of lighting product (home light system)	3	-	-	-
<i>Tools and tackles</i>	13	17	-	-
PC18. introduction to electric tool kit	2	-	-	-
PC19. discuss the key tools and tackles required for assembly and repair of concerned system.	2	-	-	-
PC20. show the use of all tools and tackles required for assembly and repair of concerned system.	-	2	-	-
PC21. demonstrate working with a screw driver	-	3	-	-
PC22. discuss about soldering and soldering iron	2	-	-	-
PC23. demonstrate cable/wire cutting practices	-	3	-	-
PC24. demonstrate how to work with an electric tool kit	-	3	-	-
PC25. demonstrate how to use soldering iron and how to do proper soldering	-	3	-	-
PC26. demonstrate how to use crimping tool.	-	3	-	-
PC27. explain various safety precautions in using tools and tackles	3	-	-	-
PC28. explain about lugs crimping tool	2	-	-	-
PC29. introduction to screw driver	2	-	-	-
<i>Solar PV lighting system and its components</i>	16	18	-	-
PC30. explain the components of a solar pv home lighting system	2	-	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC31. discuss how to use a multimeter	2	-	-	-
PC32. demonstrate how to perform other technical testing of solar home lighting system components	-	3	-	-
PC33. demonstrate how a solar panel operates and show how to measure basic parameters like current and voltage	-	3	-	-
PC34. explain the effect of shadow on solar module	3	-	-	-
PC35. discuss the working of led bulbs	3	-	-	-
PC36. explain application of multimeter technical testing	3	-	-	-
PC37. explain how a solar panel operates and measure basic parameters like current and voltage	3	-	-	-
PC38. demonstrate the components of a solar pv home lighting system.	-	3	-	-
PC39. demonstrate uses of multimeter	-	3	-	-
PC40. demonstrate the effect of shadow on solar module	-	3	-	-
PC41. demonstrate the working of led bulbs	-	3	-	-
<i>Assembly of different types of solar lamp</i>	19	23	-	-
PC42. explain how to identify various types of solar lamps	2	-	-	-
PC43. verify physical properties of all the lamp components.	2	-	-	-
PC44. explain how to measure basic electrical parameters like resistance, current and voltage of different solar lamp, electrical components	3	-	-	-
PC45. demonstrate how to test the battery voltage.	-	3	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC46. perform step by step procedure to assemble a solar lamp	-	2	-	-
PC47. show how to perform a continuity check of the load wire to check for any internal breakage	-	3	-	-
PC48. discuss to verify the pcb and led as per technical specifications mentioned by the manufacturer.	-	3	-	-
PC49. explain how to test the solar panel to check if the voltage at open circuit (voc) and current at short circuit (isc) are according to the specifications mentioned by the manufacturer	3	-	-	-
PC50. explain how to test the battery to check if its voltage is within the range specified by the manufacturer	3	-	-	-
PC51. explain how to perform a continuity check of the load wire to check for any internal breakage	3	-	-	-
PC52. discuss the use of various sensor for turn on and turn off the lamp (eg. dusk to down)	3	-	-	-
PC53. demonstrate various types of solar lamps	-	3	-	-
PC54. demonstrate how to measure basic electrical parameter of resistance, current and voltage.	-	3	-	-
PC55. show how to test the solar panel to check if the voltage at open circuit (voc) and current at short circuit (isc) are according to the specifications mentioned by the manufacturer	-	3	-	-
PC56. demonstrate how to place solar facing towards south for getting maximum radiation to get battery charged	-	3	-	-
NOS Total	68	82	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	SGJ/N0201
NOS Name	Assembly of different types of solar lamp
Sector	Green Jobs
Sub-Sector	Renewable Energy
Occupation	Assembly
NSQF Level	4
Credits	4
Version	4.0
Last Reviewed Date	30/05/2024
Next Review Date	29/05/2027
NSQC Clearance Date	30/05/2024

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SGJ/N0202: Repair solar lamps

Description

This unit is about repairing of a solar lamp

Scope

The scope covers the following :

- Repairing solar lamps

Elements and Performance Criteria

Repair of solar lamps

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

- PC1.** discuss to perform visual inspection and repair solar lamps .
- PC2.** examine and replace the faulty switches and dc sockets
- PC3.** explain the key steps in repairing solar lamps.
- PC4.** measure and verify the terminal voltage of the battery as per manufacturer's specification
- PC5.** explain how to measure and verify the voltage and current of solar pv modules with technical specifications
- PC6.** discuss and verify the connector pin and other components of a solar lamp
- PC7.** examine the working of a pcb/ led drivers
- PC8.** prepare a basic repair and maintenance report
- PC9.** demonstrate how to perform visual inspection of a solar lamp
- PC10.** demonstrate how to read the label of solar pv module and datasheet
- PC11.** demonstrate how to do soldering on pcb board.
- PC12.** show how to perform the key steps in repairing solar lamps
- PC13.** demonstrate how to verify terminal voltage of the battery
- PC14.** show how to examine and replace the faulty switches and dc sockets
- PC15.** demonstrate the working of pcb/led drivers
- PC16.** show how to prepare a basic repair and maintenance report

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the concept of the entire project
- KU2.** the entire assembly and distribution process
- KU3.** assembly timeline
- KU4.** time management concepts including discipline, punctuality, act in time on commitment and quality productive time

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- KU5.** natural resources of energy
- KU6.** terminologies like voltage, current and resistance
- KU7.** operating and working of a multimeter, soldering iron and other tools present in a tool kit
- KU8.** preliminary concepts of solar PV system
- KU9.** assembly of a solar lamp as per manufacturer
- KU10.** warranties of different components of solar lamp
- KU11.** direct working/process methods according to self-defined criteria and effective management techniques
- KU12.** standard operating procedures for carrying out visual inspection of solar lamp
- KU13.** testing procedure for verifying the performance of all the components of a solar lamp
- KU14.** structure of a basic repair and maintenance report
- KU15.** usage of different colours of dustbins
- KU16.** categorization of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics
- KU17.** waste management and methods of waste disposal
- KU18.** common sources of pollution and ways to minimize it

Generic Skills (GS)

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

- GS1.** prepare and maintain documentation
- GS2.** read and understand assembly and distribution training manuals in english / hindi / vernacular language
- GS3.** read user manuals and safety instructions
- GS4.** express statements or information clearly so that others can hear and understand
- GS5.** participate in and understand general discussions
- GS6.** respond appropriately to any queries
- GS7.** communicate with other employees in the organization
- GS8.** follow organization based decision making process
- GS9.** plan and organise work schedule to meet deadlines
- GS10.** work constructively with others
- GS11.** adhere to organisation code of contact
- GS12.** recognise problems and search for solutions
- GS13.** choose the best methods to complete assigned tasks
- GS14.** reduce repetition of errors

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Repair of solar lamps</i>	24	26	-	-
PC1. discuss to perform visual inspection and repair solar lamps .	3	-	-	-
PC2. examine and replace the faulty switches and dc sockets	3	-	-	-
PC3. explain the key steps in repairing solar lamps.	3	-	-	-
PC4. measure and verify the terminal voltage of the battery as per manufacturer's specification	3	-	-	-
PC5. explain how to measure and verify the voltage and current of solar pv modules with technical specifications	3	-	-	-
PC6. discuss and verify the connector pin and other components of a solar lamp	3	-	-	-
PC7. examine the working of a pcb/ led drivers	3	-	-	-
PC8. prepare a basic repair and maintenance report	3	-	-	-
PC9. demonstrate how to perform visual inspection of a solar lamp	-	4	-	-
PC10. demonstrate how to read the label of solar pv module and datasheet	-	4	-	-
PC11. demonstrate how to do soldering on pcb board.	-	3	-	-
PC12. show how to perform the key steps in repairing solar lamps	-	3	-	-
PC13. demonstrate how to verify terminal voltage of the battery	-	3	-	-
PC14. show how to examine and replace the faulty switches and dc sockets	-	3	-	-
PC15. demonstrate the working of pcb/led drivers	-	3	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC16. show how to prepare a basic repair and maintenance report	-	3	-	-
NOS Total	24	26	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	SGJ/N0202
NOS Name	Repair solar lamps
Sector	Green Jobs
Sub-Sector	Renewable Energy
Occupation	Operation and Maintenance
NSQF Level	4
Credits	4
Version	4.0
Last Reviewed Date	30/05/2024
Next Review Date	29/05/2027
NSQC Clearance Date	30/05/2024

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SGJ/N0106: Maintain Personal Health & Safety at project site

Description

This unit is about maintaining health, safety and hygiene at workplace.

Scope

The scope covers the following :

- Adopt safe practices at workplace
- Follow emergencies, rescue and first aid procedures
- Follow good housekeeping practices and infection control guidelines

Elements and Performance Criteria

Adopt safe practices at workplace

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

- PC1.** explain the requirements for safe work area
- PC2.** identify and report any hazards, risks or breaches in site safety to the appropriate authority
- PC3.** follow recommended safe practices in handling physical, chemical, electrical and fire hazards and risk
- PC4.** use appropriate Personal Protective Equipment(PPE) for head, eye, hand, ear, face, body and fall protection specific to work condition
- PC5.** follow safe practices when working at height and in confined space
- PC6.** handle all required tools, tackles, materials and equipment safely
- PC7.** identify expiry dates, wear and tear issues of specified equipment and accordingly inform supervisor and undertake corrective measures
- PC8.** apply ergonomic principles wherever required
- PC9.** use safety signs, labels, charts and notices at workplace
- PC10.** identify work safety procedures and instructions for handling heavy components

Follow emergencies, rescue and first aid procedures

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

- PC11.** follow emergency and evacuation procedures in case of accidents, fires and natural calamities
- PC12.** use appropriate fire extinguishers for different types of fire
- PC13.** administer first aid to victim in case of various medical emergencies including bleeding, burns, choking, electric shock, cardiac arrest, etc.
- PC14.** use correct method to move injured person during an emergency

Follow good housekeeping practices and infection control guidelines

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

- PC15.** follow recommended personal hygiene, workplace hygiene and sanitation practices
- PC16.** clean and disinfect all material, tools and supplies before and after use

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- PC17.** report immediately to concerned authorities regarding sign and symptoms of illness of self and other colleagues
- PC18.** 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 safety drills
- KU2.** importance of working in clean and safe environment
- KU3.** health and safety roles and responsibilities of relevant personnel within and outside the organization
- KU4.** reporting procedures in case of breaches or hazards for site safety, accidents and emergency situations
- KU5.** basic ergonomic principle
- KU6.** key internal and external source of health and safety information
- KU7.** meaning of hazards, risk and near miss
- KU8.** importance of Personal Protective Equipment required for specific job
- KU9.** forms and classification of hazardous substances
- KU10.** health effect associated with exposure to environmental pollution
- KU11.** housekeeping activities relevant to task
- KU12.** symptoms of infection like fever, cough, swelling and inflammation

Generic Skills (GS)

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

- GS1.** record data on waste disposal at workplace
- GS2.** complete statutory documents relevant to safety and hygiene
- GS3.** fill safety formats for near miss, unsafe condition
- GS4.** identify potential safety risk and report to appropriate authority
- GS5.** communicate and collaborate with others to incorporate sustainable practices
- GS6.** interpret general safety guidelines, labels, charts and signage

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Adopt safe practices at workplace</i>	13	19	-	-
PC1. explain the requirements for safe work area	2	-	-	-
PC2. identify and report any hazards, risks or breaches in site safety to the appropriate authority	2	3	-	-
PC3. follow recommended safe practices in handling physical, chemical, electrical and fire hazards and risk	1	2	-	-
PC4. use appropriate Personal Protective Equipment(PPE) for head, eye, hand, ear, face, body and fall protection specific to work condition	2	4	-	-
PC5. follow safe practices when working at height and in confined space	1	1	-	-
PC6. handle all required tools, tackles, materials and equipment safely	1	2	-	-
PC7. identify expiry dates, wear and tear issues of specified equipment and accordingly inform supervisor and undertake corrective measures	1	2	-	-
PC8. apply ergonomic principles wherever required	1	2	-	-
PC9. use safety signs, labels, charts and notices at workplace	1	1	-	-
PC10. identify work safety procedures and instructions for handling heavy components	1	2	-	-
<i>Follow emergencies, rescue and first aid procedures</i>	4	4	-	-
PC11. follow emergency and evacuation procedures in case of accidents, fires and natural calamities	1	1	-	-
PC12. use appropriate fire extinguishers for different types of fire	1	1	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. administer first aid to victim in case of various medical emergencies including bleeding, burns, choking, electric shock, cardiac arrest, etc.	1	1	-	-
PC14. use correct method to move injured person during an emergency	1	1	-	-
<i>Follow good housekeeping practices and infection control guidelines</i>	4	6	-	-
PC15. follow recommended personal hygiene, workplace hygiene and sanitation practices	1	1	-	-
PC16. clean and disinfect all material, tools and supplies before and after use	1	1	-	-
PC17. report immediately to concerned authorities regarding sign and symptoms of illness of self and other colleagues	1	2	-	-
PC18. follow processes specified for disposal of hazardous waste	1	2	-	-
NOS Total	21	29	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	SGJ/N0106
NOS Name	Maintain Personal Health & Safety at project site
Sector	Green Jobs
Sub-Sector	Renewable Energy
Occupation	Health & Safety , Installation, Solar Panel Installation Technician
NSQF Level	4
Credits	1
Version	4.0
Last Reviewed Date	30/05/2024
Next Review Date	29/05/2027
NSQF Clearance Date	30/05/2024

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SGJ/N0203: Assemble and repair solar home lighting

Description

This unit is about assembling solar home lighting systems and its components.

Scope

The scope covers the following :

- Assembly of Solar home lighting systems
- Repair Solar home lighting systems

Elements and Performance Criteria

Assembly of solar home lighting system

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

- PC1.** verify physical properties of all the solar home lighting systems components
- PC2.** discuss to measure basic electrical parameters like resistance, current and voltage of different solar home lighting electrical components
- PC3.** discuss to test the solar panel to check if the Voltage at open circuit (VoC) and current at short circuit (Isc) are according to the specifications mentioned by the manufacturer
- PC4.** test the battery to check if it's voltage is within the range specified by the manufacturer
- PC5.** perform a continuity check of the load wire to check for any internal breakage
- PC6.** verify the PCB and LED as per technical specifications mentioned by the manufacturer
- PC7.** identify recyclable and non-recyclable, and hazardous waste generated
- PC8.** demonstrate how to perform visual inspection
- PC9.** demonstrate how to verify terminal voltage
- PC10.** demonstrate working of a PCB/LED drivers
- PC11.** perform step by step procedure to assemble a solar home lighting system
- PC12.** demonstrate how to do electrical connection a solar home lighting system
- PC13.** demonstrate how to promote a safe and interactive environment at work while using inclusive language

Repair of solar home lighting systems

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

- PC14.** discuss to perform visual inspection of the solar home lighting systems
- PC15.** discuss to measure and verify the terminal voltage of the battery as per manufacturer's specification
- PC16.** discuss to measure and verify the voltage and current of solar pv modules with technical specifications
- PC17.** examine and replace the faulty switches and DC sockets
- PC18.** examine the connector pin and other components of a solar home lighting systems
- PC19.** examine the working of a PCB/ LED drivers

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- PC20.** examine the working of the charge controller
- PC21.** prepare a basic repair and maintenance report
- PC22.** discuss to segregate waste into different categories, if any
- PC23.** demonstrate how to perform visual inspection of the solar home lighting systems
- PC24.** demonstrate how to measure and verify the terminal voltage of the battery as per manufacturer's specification
- PC25.** demonstrate working of PCB/LED driver
- PC26.** demonstrate how to identify the faulty switches and DC socket and replace or repair them
- PC27.** illustrate the working of solar charge controller and their electrical connections.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the concept of the entire project.
- KU2.** the entire assembly and distribution process
- KU3.** must be well versed with the assembly timeline
- KU4.** time management concepts including discipline, punctuality, act in time on commitment and quality productive time
- KU5.** natural resources of energy
- KU6.** voltage, current and resistance.
- KU7.** characteristics & specifications of battery, solar module, PCB (Printed Circuit Board), LED (light-Emitting-Diode) load wire and other components of a solar home lighting systems as per the manufacturer.
- KU8.** operating and working of a multimeter, soldering iron and other tools present in a tool kit.
- KU9.** preliminary concepts of solar pv system
- KU10.** complete assembly of a solar home lighting systems as per manufacturer
- KU11.** warranties of different components of solar home lighting systems.
- KU12.** ability to shape and direct working/process methods according to self-defined criteria and effective management techniques
- KU13.** standard operating procedures for carrying out visual inspection of solar home lighting systems.
- KU14.** testing procedure for verifying the performance of all the components of a solar home lighting systems.
- KU15.** structure of a basic repair and maintenance report.

Generic Skills (GS)

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

- GS1.** prepare and maintain documentation
- GS2.** read and Understand assembly and distribution training manuals in English / Hindi / vernacular language.

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- GS3.** basic understanding of vernacular/local language
- GS4.** read user manuals and safety instructions
- GS5.** express statements or information clearly so that others can hear and understand
- GS6.** participate in and understand general discussions
- GS7.** respond appropriately to any queries
- GS8.** communicate with other employees in the organization
- GS9.** follow organization based decision making process
- GS10.** plan and organise work schedule to meet deadlines
- GS11.** work constructively with others.
- GS12.** adhere to organisation code of contact
- GS13.** recognise problems and search for solutions.
- GS14.** choose the best methods to complete assigned tasks
- GS15.** reduce repetition of errors

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assembly of solar home lighting system</i>	22	30	-	-
PC1. verify physical properties of all the solar home lighting systems components	3	-	-	-
PC2. discuss to measure basic electrical parameters like resistance, current and voltage of different solar home lighting electrical components	3	-	-	-
PC3. discuss to test the solar panel to check if the Voltage at open circuit (VoC) and current at short circuit (Isc) are according to the specifications mentioned by the manufacturer	4	-	-	-
PC4. test the battery to check if it's voltage is within the range specified by the manufacturer	3	-	-	-
PC5. perform a continuity check of the load wire to check for any internal breakage	3	-	-	-
PC6. verify the PCB and LED as per technical specifications mentioned by the manufacturer	3	-	-	-
PC7. identify recyclable and non-recyclable, and hazardous waste generated	3	-	-	-
PC8. demonstrate how to perform visual inspection	-	5	-	-
PC9. demonstrate how to verify terminal voltage	-	5	-	-
PC10. demonstrate working of a PCB/LED drivers	-	5	-	-
PC11. perform step by step procedure to assemble a solar home lighting system	-	5	-	-
PC12. demonstrate how to do electrical connection a solar home lighting system	-	5	-	-
PC13. demonstrate how to promote a safe and interactive environment at work while using inclusive language	-	5	-	-
<i>Repair of solar home lighting systems</i>	27	21	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. discuss to perform visual inspection of the solar home lighting systems	3	-	-	-
PC15. discuss to measure and verify the terminal voltage of the battery as per manufacturer's specification	3	-	-	-
PC16. discuss to measure and verify the voltage and current of solar pv modules with technical specifications	3	-	-	-
PC17. examine and replace the faulty switches and DC sockets	3	-	-	-
PC18. examine the connector pin and other components of a solar home lighting systems	3	-	-	-
PC19. examine the working of a PCB/ LED drivers	3	-	-	-
PC20. examine the working of the charge controller	3	-	-	-
PC21. prepare a basic repair and maintenance report	3	-	-	-
PC22. discuss to segregate waste into different categories, if any	3	-	-	-
PC23. demonstrate how to perform visual inspection of the solar home lighting systems	-	5	-	-
PC24. demonstrate how to measure and verify the terminal voltage of the battery as per manufacturer's specification	-	4	-	-
PC25. demonstrate working of PCB/LED driver	-	4	-	-
PC26. demonstrate how to identify the faulty switches and DC socket and replace or repair them	-	4	-	-
PC27. illustrate the working of solar charge controller and their electrical connections.	-	4	-	-
NOS Total	49	51	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	SGJ/N0203
NOS Name	Assemble and repair solar home lighting
Sector	Green Jobs
Sub-Sector	Renewable Energy
Occupation	Assembly and Repair
NSQF Level	4
Credits	1
Version	4.0
Last Reviewed Date	30/05/2024
Next Review Date	29/05/2027
NSQF Clearance Date	30/05/2024

Qualification Pack

SGJ/N0204: Assemble and repair solar street lights

Description

This unit is about how to assemble and repair solar street lights

Scope

The scope covers the following :

- Assembly of Solar Street lights
- Repair solar street lights

Elements and Performance Criteria

Assembly of solar street lights

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

- PC1.** • discuss to verify physical properties of street lights components and how to perform visual inspection of the solar street lighting systems
- PC2.** demonstrate how to measure basic electrical parameters like resistance, current and voltage of different solar street lights electrical components.
- PC3.** demonstrate how to test the solar panel to check if the Voltage at open circuit (VoC) and current at open circuit (IoC) are according to the specifications mentioned by the manufacturer
- PC4.** perform a continuity check of the load wire to check for any internal breakage
- PC5.** verify the PCB and LED as per technical specifications mentioned by the manufacturer.
- PC6.** examine the connector pin and other components of a solar street lighting systems
- PC7.** discuss the use of latest sensor used in to the street light
- PC8.** discuss the use of latest battery technology use for fast charging and discharging (eg. Lithium and Vanadium battery)
- PC9.** demonstrate how to perform visual inspection of the solar street lighting systems
- PC10.** demonstrate how to measure and verify the terminal voltage of the battery as per manufacturer's specification
- PC11.** demonstrate working of PCB/LED driver
- PC12.** demonstrate to promote a safe and interactive environment while using inclusive language at work
- PC13.** demonstrate to verify the physical properties of street lights components
- PC14.** measure and verify the terminal voltage of the battery as per manufacturer's specification
- PC15.** measure and verify the voltage and current of solar pv modules with technical specifications

Repair of solar street lights

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

- PC16.** perform visual inspection of a solar street light system.
- PC17.** measure and verify the terminal voltage of the battery as per manufacturers specification.

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- PC18.** measure and verify the voltage and current of solar PV modules with technical specifications
- PC19.** verify and replace the faulty switches and DC sockets
- PC20.** examine the connector pin and other components of a solar home lighting systems
- PC21.** examine the working of a PCB/ LED drivers
- PC22.** examine the working of the charge controller
- PC23.** prepare a basic repair and maintenance report
- PC24.** demonstrate how to perform visual inspection of the solar home lighting systems
- PC25.** demonstrate how to measure and verify the terminal voltage of the battery as per manufacturer's specification
- PC26.** demonstrate how to perform continuity test
- PC27.** demonstrate to prepare a basic repair and maintenance report

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the concept of the entire project.
- KU2.** the entire assembly and distribution process
- KU3.** must be well versed with the assembly timeline
- KU4.** time management concepts including discipline, punctuality, act in time on commitment and quality productive time
- KU5.** natural resources of energy
- KU6.** voltage, current and resistance.
- KU7.** characteristics & specifications of battery, solar module, PCB (Printed Circuit Board), LED (light-Emitting-Diode) load wire and other components of a solar street lights as per the manufacturer.
- KU8.** operating and working of a multimeter, soldering iron and other tools present in a tool kit.
- KU9.** preliminary concepts of solar pv system
- KU10.** complete assembly of a solar street lights as per manufacturer
- KU11.** warranties of different components of solar street lights.
- KU12.** ability to shape and direct working/process methods according to self-defined criteria and effective management techniques
- KU13.** standard operating procedures for carrying out visual inspection of solar street lights.
- KU14.** testing procedure for verifying the performance of all the components of a solar street lights.
- KU15.** structure of a basic repair and maintenance report.

Generic Skills (GS)

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

- GS1.** prepare and maintain documentation
- GS2.** read and Understand assembly and distribution training manuals in English / Hindi / vernacular language.

Qualification Pack

- GS3.** basic understanding of vernacular/local language
- GS4.** read user manuals and safety instructions
- GS5.** express statements or information clearly so that others can hear and understand
- GS6.** participate in and understand general discussions
- GS7.** respond appropriately to any queries
- GS8.** communicate with other employees in the organization
- GS9.** follow organization rule-based decision making process
- GS10.** plan and organise work schedule to meet deadlines
- GS11.** work constructively with others.
- GS12.** adhere to organisation code of contact
- GS13.** recognise problems and search for solutions.
- GS14.** choose the best methods to complete assigned tasks
- GS15.** reduce repetition of errors

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assembly of solar street lights</i>	29	29	-	-
PC1. • discuss to verify physical properties of street lights components and how to perform visual inspection of the solar street • lighting systems	4	4	-	-
PC2. demonstrate how to measure basic electrical parameters like resistance, current and voltage of different solar street lights electrical components.	-	5	-	-
PC3. demonstrate how to test the solar panel to check if the Voltage at open circuit (VoC) and current at open circuit (IoC) are according to the specifications mentioned by the manufacturer	-	5	-	-
PC4. perform a continuity check of the load wire to check for any internal breakage	4	-	-	-
PC5. verify the PCB and LED as per technical specifications mentioned by the manufacturer.	4	-	-	-
PC6. examine the connector pin and other components of a solar street lighting systems	4	-	-	-
PC7. discuss the use of latest sensor used in to the street light	4	-	-	-
PC8. discuss the use of latest battery technology use for fast charging and discharging (eg. Lithium and Vanadium battery)	3	-	-	-
PC9. demonstrate how to perform visual inspection of the solar street lighting systems	-	3	-	-
PC10. demonstrate how to measure and verify the terminal voltage of the battery as per manufacturer's specification	-	3	-	-
PC11. demonstrate working of PCB/LED driver	-	3	-	-
PC12. demonstrate to promote a safe and interactive environment while using inclusive language at work	-	3	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. demonstrate to verify the physical properties of street lights components	-	3	-	-
PC14. measure and verify the terminal voltage of the battery as per manufacturer's specification	3	-	-	-
PC15. measure and verify the voltage and current of solar pv modules with technical specifications	3	-	-	-
<i>Repair of solar street lights</i>	23	19	-	-
PC16. perform visual inspection of a solar street light system.	3	-	-	-
PC17. measure and verify the terminal voltage of the battery as per manufacturers specification.	3	-	-	-
PC18. measure and verify the voltage and current of solar PV modules with technical specifications	3	-	-	-
PC19. verify and replace the faulty switches and DC sockets	3	-	-	-
PC20. examine the connector pin and other components of a solar home lighting systems	3	-	-	-
PC21. examine the working of a PCB/ LED drivers	3	-	-	-
PC22. examine the working of the charge controller	3	-	-	-
PC23. prepare a basic repair and maintenance report	2	-	-	-
PC24. demonstrate how to perform visual inspection of the solar home lighting systems	-	4	-	-
PC25. demonstrate how to measure and verify the terminal voltage of the battery as per manufacturer's specification	-	5	-	-
PC26. demonstrate how to perform continuity test	-	5	-	-
PC27. demonstrate to prepare a basic repair and maintenance report	-	5	-	-
NOS Total	52	48	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	SGJ/N0204
NOS Name	Assemble and repair solar street lights
Sector	Green Jobs
Sub-Sector	Renewable Energy
Occupation	Assembly and Repair
NSQF Level	4
Credits	1
Version	4.0
Last Reviewed Date	30/05/2024
Next Review Date	29/05/2027
NSQC Clearance Date	30/05/2024

Qualification Pack

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

Qualification Pack

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

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- 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

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. understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values - Citizenship</i>	1	1	-	-
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	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.	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	1	1	-	-
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	3	4	-	-
PC9. use various financial products and services safely and securely	-	-	-	-

Qualification Pack

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	-	-	-	-
<i>Essential Digital Skills</i>	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	-	-	-	-
<i>Entrepreneurship</i>	3	5	-	-
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	2	2	-	-
PC16. identify different types of customers	-	-	-	-
PC17. identify customer needs and address them appropriately	-	-	-	-
PC18. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	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	-	-

Qualification Pack

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	24/02/2022
Next Review Date	23/02/2027
NSQC Clearance Date	24/02/2022

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification 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 assessment, every trainee should score the Recommended Pass % aggregate for the Qualification.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification.

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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
SGJ/N0201.Assembly of different types of solar lamp	68	82	-	-	150	30
SGJ/N0202.Repair solar lamps	24	26	-	-	50	10
SGJ/N0106.Maintain Personal Health & Safety at project site	21	29	-	-	50	10
SGJ/N0203.Assemble and repair solar home lighting	49	51	-	-	100	20
SGJ/N0204.Assemble and repair solar street lights	52	48	-	-	100	20
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	10
Total	234	266	-	-	500	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.

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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.