Electrical Assembly Operator - Control Panel

QP Code: ELE/Q7306

Version: 3.0

NSQF Level: 3

Qualification Pack

Contents

Qualification Pack

ELE/Q7306: Electrical Assembly Operator - Control Panel

Brief Job Description

The individual at work mounts and installs and connects internal electronic modules devices and components on the control panel.

Personal Attributes

The individual must have the ability to work in high-decibel noise environment and in a standing position for long hours.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. ELE/N7307: Assemble Control Panel

2. ELE/N9972: Communicate and coordinate effectively with others

3. ELE/N1003: Work effectively, sustainably and safely

4. DGT/VSQ/N0101: Employability Skills (30 Hours)

Qualification Pack (QP) Parameters

Sector	Electronics
Sub-Sector	Industrial Automation
Occupation	Assembly-I&A
Country	India
NSQF Level	3
Credits	15
Aligned to NCO/ISCO/ISIC Code	NCO-2004/7137.20
Minimum Educational Qualification & Experience	8th grade pass (plus 2 year of NTC/relevant experience) OR 10th grade pass

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	24/06/2025
NSQC Approval Date	24/02/2022
Version	3.0
Reference code on NQR	2022/EHW/ESSC/06668
NQR Version	1.0

Remarks:

NA

ELE/N7307: Assemble Control Panel

Description

This OS unit is about making the power cord, mounting internal electronic module, devices and components within the control panel and connecting as per electrical schematics

Elements and Performance Criteria

Understanding work requirement

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

PC1. interact with the supervisor in order to understand the production schedule

PC2. plan the days production activities based on the supervisors instructions

PC3. use drawings, job instructions or work manuals

PC4. check availability of materials required for wiring

Assembling control panel

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

PC5. collect modules, devices and components required to assemble

PC6. visually inspect components to be assembled for any physical damage

PC7. ensure that the panel is positioned as prescribed and following safety norms

PC8. make sure that slots and bases for plug in devices are made are as per design specification

PC9. check if holes are drilled at the right places to install different components

PC10. use recommended tools and test devices required for the assembly process

PC11. ensure that tools and equipment are in safe and usable condition

PC12. install the terminal strips and the neutral bus as defined in the schematics

PC13. place relays, shunts, transformers, power supply and any other components in designated bins as per bill of material

PC14. strictly follow the design provided in the schematics

PC15. ensure that there are no short circuits caused and use rubber washers as mentioned in the schematic

PC16. choose prescribed size of wires for inter connection between various components

PC17. secure all the components using connectors and securing devices

PC18. follow applicable local electrical codes and standards

PC19. return all tools and equipment to stores at the end of each days activities

PC20. check the assembled panel and make sure that all activities have been completed and that all devices have been securely installed

Reporting to superior

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

PC21. highlight any errors in previous step of the assembly process identified

PC22. report defective or inadequate number of components in time

PC23. report about inadequate quantity of consumables such as connectors, screws, nuts, etc.

Achieving productivity, quality and safety standards

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

PC25. meet 100% daily or monthly target

PC26. achieve zero errors in assembling as per company policy

PC27. achieve zero component damage due to electrostatic discharge

PC28. check any repetitive defects during the assembly process

PC29. keep work area clean and organised

PC30. identify problems on the assembly line and alert in time

PC31. achieve 100% compliance with health and safety guidelines and rules

PC24. achieve 100% work schedule as planned for the day

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. companys policies on: incentives, delivery standards and personnel management

KU2. reporting and documentation processes

KU3. importance of the individuals role in the workflow

KU4. reporting structure

KU5. electro-mechanical assembly and wiring instructions

KU6. hazards associated with panel assembly and wiring and how they can be avoided

KU7. general principles of wiring and assembly

KU8. procedure followed to carry out insulation stripping, securing of cables and wires, cable routing, cable forming/bending, colour coding wires and cables

KU9. types of cables such as single core/multicore/fibre optic cable, etc.

KU10. types of components and sub-assemblies used in the panel assembly process

KU11. preparations and precautions to be taken on the components and the panel before assembly process

KU12. basics of automation and electro mechanical control systems

KU13. regulations applicable during selection of wiring/cabling

KU14. methods of attaching labels, warning signs on the panel

KU15. basic operation of PLCs, relays, contactors, circuit breakers, solenoids, actuators, controllers, etc.

KU16. motors, generators, starters and their controls

KU17. safety norms in handling electrical/electronic components and electrostatic discharge

KU18. customer safety requirements and applicable safety standards

KU19. ISO standards and procedures applicable for assembly activities

KU20. fundamentals of electricity such as Ohms law, difference between AC and DC, series and parallel connections

KU21. components such as diode, transformer, LED, photo transistor, capacitor, resistor, inductor, thermistor, ICs, connectors

KU22. how to read values, colour coding, polarity, orientation, tolerance

KU23. specific safety precautions while working in an electronic assembly unit

KU24. protective gear such as goggles, gloves, rubber shoes, etc.

KU25. selection and maintenance of various tools used during the assembly process

KU26. frequently occurring errors, causes and preventive measures

KU27. work place norms 5S and Kaizen

Generic Skills (GS)

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

GS1. read warnings, instructions and other text material on product labels, components, etc.

GS2. read drawings and job sheets or work orders

GS3. use computers for documentation or record keeping

GS4. complete forms such as work orders, invoices, maintenance records

GS5. deliver work on time to the next process

GS6. share work load with other operators

GS7. cabinet assembly, bucket assembly, shelf/ door assembly, cable assembly

GS8. electrical parts, mechanical parts, electronic parts and their wiring

GS9. colour codes, labels and specifications

GS10. packaging standards and product delivery modes

GS11. quality standards and pricing of product

GS12. use screw driver, ratchets, spring driver, speciality wrenches, inspection fixtures, wire cutter, pliers, tester, spanner, hammer, hand bender, ladder, knife, voltmeter, ammeter, wattmeter, MEGGER etc.

GS13. create a hazard-free work environment

GS14. supervisor to achieve the daily production target

GS15. co-workers in order to share and learn

GS16. analyse errors to avoid repetition in future

GS17. improve work process

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Understanding work requirement	**8**	**8**	**-**	**-**
PC1. interact with the supervisor in order to understand the production schedule	2	2	-	-
PC2. plan the days production activities based on the supervisors instructions	2	2	-	-
PC3. use drawings, job instructions or work manuals	2	2	-	-
PC4. check availability of materials required for wiring	2	2	-	-
Assembling control panel	**21**	**30**	**-**	**-**
PC5. collect modules, devices and components required to assemble	2	2	-	-
PC6. visually inspect components to be assembled for any physical damage	2	2	-	-
PC7. ensure that the panel is positioned as prescribed and following safety norms	2	2	-	-
PC8. make sure that slots and bases for plug in devices are made are as per design specification	1	2	-	-
PC9. check if holes are drilled at the right places to install different components	2	1	-	-
PC10. use recommended tools and test devices required for the assembly process	1	2	-	-
PC11. ensure that tools and equipment are in safe and usable condition	1	2	-	-
PC12. install the terminal strips and the neutral bus as defined in the schematics	1	2	-	-
PC13. place relays, shunts, transformers, power supply and any other components in designated bins as per bill of material	1	2	-	-
PC14. strictly follow the design provided in the schematics	2	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. ensure that there are no short circuits caused and use rubber washers as mentioned in the schematic	1	2	-	-
PC16. choose prescribed size of wires for inter connection between various components	1	2	-	-
PC17. secure all the components using connectors and securing devices	1	2	-	-
PC18. follow applicable local electrical codes and standards	1	2	-	-
PC19. return all tools and equipment to stores at the end of each days activities	1	2	-	-
PC20. check the assembled panel and make sure that all activities have been completed and that all devices have been securely installed	1	2	-	-
Reporting to superior	**3**	**6**	**-**	**-**
PC21. highlight any errors in previous step of the assembly process identified	1	2	-	-
PC22. report defective or inadequate number of components in time	1	2	-	-
PC23. report about inadequate quantity of consumables such as connectors, screws, nuts, etc.	1	2	-	-
Achieving productivity, quality and safety standards	**8**	**16**	**-**	**-**
PC25. meet 100% daily or monthly target	1	2	-	-
PC26. achieve zero errors in assembling as per company policy	1	2	-	-
PC27. achieve zero component damage due to electrostatic discharge	1	2	-	-
PC28. check any repetitive defects during the assembly process	1	2	-	-
PC29. keep work area clean and organised	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC30. identify problems on the assembly line and alert in time	1	2	-	-
PC31. achieve 100% compliance with health and safety guidelines and rules	1	2	-	-
PC24. achieve 100% work schedule as planned for the day	1	2	-	-
NOS Total	**40**	**60**	**-**	**-**

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N7307
NOS Name	Assemble Control Panel
Sector	Electronics
Sub-Sector	Industrial Automation
Occupation	MANUFACTURING
NSQF Level	3
Credits	TBD
Version	1.0
Last Reviewed Date	24/02/2022
Next Review Date	24/06/2025
NSQC Clearance Date	24/02/2022

ELE/N9972: Communicate and coordinate effectively with others

Description

This unit is about effective, respectful communication and coordination with supervisors and colleagues

Scope

The scope covers the following :

- Communicate effectively with supervisor and colleagues
- Respect gender and ability differences

Elements and Performance Criteria

Communicate effectively with supervisor and colleagues

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

PC1. communicate potential hazards of a particular location

PC2. comply with organisation's policies and procedures for working with colleagues

PC3. maintain personal hygiene and professional appearance

PC4. seek clarification on the information provided by supervisor, if needed

PC5. respect the personal and professional space of colleagues and superiors

PC6. report work completed as per the schedule to superior and inform of any deviations or anomalies

PC7. analyse and act on feedback received from supervisor

Respect gender and ability differences

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

PC8. work depicting proper behaviour towards all genders and people with disability

PC9. identify acts of discrimination and sexual harassment and report to concerned authorities

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. importance of personal grooming

KU2. organisation's policy on code of conduct

KU3. organisation's reporting structure and documentation policy

KU4. how to communicate effectively through all means including face-to-face, telephonic as well as written

KU5. different types of information that colleagues might need and the importance of providing the same as and when required

KU6. rights and duties w.r.t PwD at workplace

KU7. organisation policies and standards to support PwD

KU8. gender and disability based concepts or issues such as social and cultural bias, gender roles stereotypes, gender inequality and discrimination, especially for women and transgender

KU9. organisation grievance redressal mechanisms and related legislations

KU10. health and safety precautions for all individuals, including PwD at workplace

Generic Skills (GS)

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

GS1. listen actively and carefully in all interactions

GS2. communicate politely under all circumstances

GS3. report potential areas of disruptions to work process in writing or in person

GS4. maintain positive and effective relationships with others

GS5. decide when to report to supervisor and when to deal with a colleague depending on the type of concern

GS6. receive and act on supervisor's feedback in a constructive manner

GS7. speak, listen, and write using gender-inclusive or gender-neutral terms and gestures

GS8. be aware and accountable of ones own gender identity and role, as well as beliefs and practices about disability

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Communicate effectively with supervisor and colleagues	**27**	**51**	**-**	**-**
PC1. communicate potential hazards of a particular location	4	7	-	-
PC2. comply with organisation's policies and procedures for working with colleagues	4	7	-	-
PC3. maintain personal hygiene and professional appearance	4	7	-	-
PC4. seek clarification on the information provided by supervisor, if needed	4	8	-	-
PC5. respect the personal and professional space of colleagues and superiors	3	8	-	-
PC6. report work completed as per the schedule to superior and inform of any deviations or anomalies	4	7	-	-
PC7. analyse and act on feedback received from supervisor	4	7	-	-
Respect gender and ability differences	**8**	**14**	**-**	**-**
PC8. work depicting proper behaviour towards all genders and people with disability	4	7	-	-
PC9. identify acts of discrimination and sexual harassment and report to concerned authorities	4	7	-	-
NOS Total	**35**	**65**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N9972
NOS Name	Communicate and coordinate effectively with others
Sector	Electronics
Sub-Sector	Generic
Occupation	Generic - Organizational Behaviour
NSQF Level	3
Credits	TBD
Version	2.0
Last Reviewed Date	24/02/2022
Next Review Date	24/06/2025
NSQC Clearance Date	24/02/2022

ELE/N1003: Work effectively, sustainably and safely

Description

This unit is about following health and safety procedures, waste management procedures and resource management in order to achieve required productivity and quality.

Scope

The scope covers the following :

- Achieve optimum productivity and quality
- Implement health and safety procedures
- Organise waste management and recycling
- Conserve resources

Elements and Performance Criteria

Achieve optimum productivity and quality

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

PC1. keep immediate work area clean and tidy

PC2. work effectively to meet daily target

PC3. deliver work of expected quality despite constraints

PC4. ensure timely completion of tasks

PC5. comply with organization's policies and procedures

Implement health and safety procedures

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

PC6. take ESD precautions while doing work

PC7. avoid any damage in components due to negligence in ESD procedures

PC8. participate in fire drills or any other safety workshops organised by the organisation

PC9. use appropriate Personal Protective Equipment (PPE) as advised by the organisation

Organise waste management and recycling

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

PC10. identify and segregate recyclable/non-recyclable and hazardous wastes

PC11. dispose waste as per the suggested procedures by the organization

PC12. participate in waste management and waste disposal workshops organised at workplace

Conserve resources

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

PC13. use all resources judiciously

PC14. perform routine cleaning of tools, machines and equipment

PC15. report malfunctioning of machines and equipment

PC16. connect electrical equipment and appliances properly when in use and turn off when not in use

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. importance of time management

KU2. organizational safety and health policy

KU3. different waste categories such as dry, wet, recyclable, non-recyclable and single use plastic items

KU4. usage of different colours of dustbins to dispose waste

KU5. cause and effect of greening of jobs

KU6. methods of waste disposal

KU7. methods of recycling as well as repairing and reusing electronic components

KU8. efficient utilisation of material and water

KU9. basics of electricity and prevalent energy efficient devices

KU10. ways to recognise common electrical problems

KU11. common practices of conserving electricity

Generic Skills (GS)

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

GS1. read job cards/complaint registers for the work requirement

GS2. organise work and be punctual

GS3. read instructions, warnings, labels on equipment while doing work

GS4. escalate any health and safety issues to supervisors

GS5. report any inappropriate incidents/issues to the relevant person

GS6. write in local/English language and complete written work with attention to detail

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Achieve optimum productivity and quality	**12**	**18**	**-**	**-**
PC1. keep immediate work area clean and tidy	2	4	-	-
PC2. work effectively to meet daily target	2	4	-	-
PC3. deliver work of expected quality despite constraints	2	3	-	-
PC4. ensure timely completion of tasks	3	4	-	-
PC5. comply with organization's policies and procedures	3	3	-	-
Implement health and safety procedures	**9**	**14**	**-**	**-**
PC6. take ESD precautions while doing work	2	4	-	-
PC7. avoid any damage in components due to negligence in ESD procedures	2	3	-	-
PC8. participate in fire drills or any other safety workshops organised by the organisation	2	3	-	-
PC9. use appropriate Personal Protective Equipment (PPE) as advised by the organisation	3	4	-	-
Organise waste management and recycling	**8**	**12**	**-**	**-**
PC10. identify and segregate recyclable/non-recyclable and hazardous wastes	3	4	-	-
PC11. dispose waste as per the suggested procedures by the organization	2	4	-	-
PC12. participate in waste management and waste disposal workshops organised at workplace	3	4	-	-
Conserve resources	**11**	**16**	**-**	**-**
PC13. use all resources judiciously	2	4	-	-
PC14. perform routine cleaning of tools, machines and equipment	3	4	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. report malfunctioning of machines and equipment	3	4	-	-
PC16. connect electrical equipment and appliances properly when in use and turn off when not in use	3	4	-	-
NOS Total	**40**	**60**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N1003
NOS Name	Work effectively, sustainably and safely
Sector	Electronics
Sub-Sector	Generic
Occupation	Generic - Health Safety
NSQF Level	3
Credits	TBD
Version	2.0
Last Reviewed Date	24/02/2022
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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

Description

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

Scope

The scope covers the following :

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

Elements and Performance Criteria

Introduction to Employability Skills

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

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

Constitutional values – Citizenship

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

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

Becoming a Professional in the 21st Century

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

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

Basic English Skills

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

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

Communication Skills

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

PC5. follow good manners while communicating with others

PC6. work with others in a team

Diversity & Inclusion

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

PC7.   communicate and behave appropriately with all genders and PwD

PC8.   report any issues related to sexual harassment

Financial and Legal Literacy

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

PC9.   use various financial products and services safely and securely

PC10.   calculate income, expenses, savings etc.

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

Essential Digital Skills

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

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

PC13.   use internet and social media platforms securely and safely

Entrepreneurship

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

PC14.   identify and assess opportunities for potential business

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

Customer Service

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

PC16.   identify different types of customers

PC17.   identify customer needs and address them appropriately

PC18.   follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC19.   create a basic biodata

PC20.   search for suitable jobs and apply

PC21.   identify and register apprenticeship opportunities as per requirement

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1.   need for employability skills

KU2.   various constitutional and personal values

KU3.   different environmentally sustainable practices and their importance

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

KU5.   how to use basic spoken English language

KU6.   Do and dont of effective communication

KU7.   inclusivity and its importance

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

KU9.   different types of financial products and services

KU10. how to compute income and expenses

KU11. importance of maintaining safety and security in financial transactions

KU12. different legal rights and laws

KU13. how to operate digital devices and applications safely and securely

KU14. ways to identify business opportunities

KU15. types of customers and their needs

KU16. how to apply for a job and prepare for an interview

KU17. apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

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

GS1. communicate effectively using appropriate language

GS2. behave politely and appropriately with all

GS3. perform basic calculations

GS4. solve problems effectively

GS5. be careful and attentive at work

GS6. use time effectively

GS7. maintain hygiene and sanitisation to avoid infection

Assessment Criteria

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

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

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	NA
Next Review Date	29/01/2026
NSQC Clearance Date	29/01/2021

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

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

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

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

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

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

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

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

Minimum Aggregate Passing % at QP Level : 50

(**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/N7307.Assemble Control Panel	40	60	-	-	100	60
ELE/N9972.Communicate and coordinate effectively with others	35	65	-	-	100	15
ELE/N1003.Work effectively, sustainably and safely	40	60	-	-	100	15
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	0	0	50	10
Total	**135**	**215**	**-**	**-**	**350**	**100**

Acronyms

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

Glossary

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

Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.