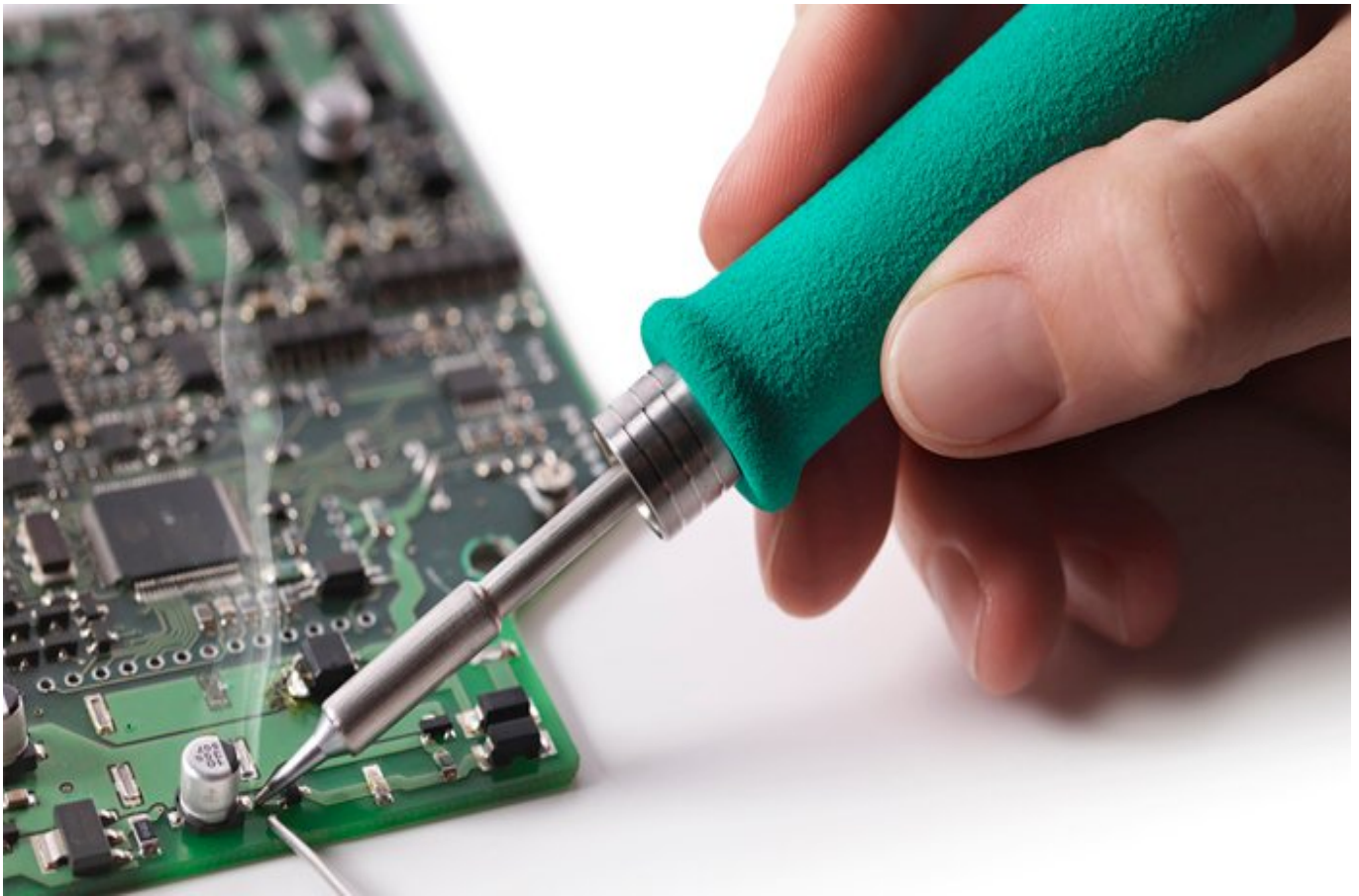


Qualification Pack



Hand Soldering Technician - Telecom Boards

QP Code: TEL/Q2500

Version: 3.0

NSQF Level: 3

Telecom Sector Skill Council || 3rd Floor, Plot No 126, Sector - 44
Gurgaon - 122003



Qualification Pack

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Qualification Pack

TEL/Q2500: Hand Soldering Technician - Telecom Boards

Brief Job Description

An individual in this job role is responsible for soldering/de-soldering components on telecom boards, re-work on boards to address soldering defects and undertake cleaning and inspection of boards.

Personal Attributes

This job requires the individual to have technical appreciation of the processes, eye for details and focused orientation to work. Individual needs to be process oriented and should have ability to work with concentration during the shift hours.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [TEL/N2500: High Density Hand Soldering of Components on Telecom Boards](#)
2. [TEL/N2501: Rework on Defects and Undertake Selective Soldering](#)
3. [TEL/N2502: Cleaning and Inspection of Telecom Boards](#)
4. [TEL/N9101: Organize Work and Resources as per Health and Safety Standards](#)
5. [TEL/N9102: Interact Effectively with Team Members and Customers](#)
6. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Telecom
Sub-Sector	Handset
Occupation	Communication Electronics
Country	India
NSQF Level	3
Credits	15
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3114.1404

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Minimum Educational Qualification & Experience	10th grade pass OR 8th grade pass (with two year of (NTC/ NAC) after 8th) OR 8th grade pass (and pursuing continuous schooling in regular school with no experience required) OR 9th grade pass with 1 Year of experience OR Previous relevant Qualification of NSQF Level (2) with 3 Years of experience
Minimum Level of Education for Training in School	10th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	15 Years
Last Reviewed On	NA
Next Review Date	24/02/2025
NSQC Approval Date	24/02/2022
Version	3.0
Reference code on NQR	QG-03-TL-00456-2023-V1.1-TSSC
NQR Version	1.1

Qualification Pack

TEL/N2500: High Density Hand Soldering of Components on Telecom Boards

Description

This OS unit is about skills required to undertake high density hand soldering of components on telecom boards.

Scope

The scope covers the following :

- Prepare board and material/components
- Soldering of components on boards

Elements and Performance Criteria

Prepare board and material/components

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

- PC1.** analyse Computer-aided Design (CAD) specifications
- PC2.** set the soldering jig/fixture as per the work specifications
- PC3.** gather all components to be soldered as per the specifications
- PC4.** set the temperature as per the work and component specifications and measure the same using sensors
- PC5.** select the correct solder bit and soldering wire for the given work
- PC6.** clean solder bits, component leads and boards of any contamination
- PC7.** clean the solder wire of any contamination
- PC8.** select the correct flux as per specifications

Soldering of Components on Boards

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

- PC9.** undertake correct placement and orientation of components
- PC10.** demonstrate amount of solder feeding application, sufficient flux addition, correct positioning and vector speed of nozzle, no solder on gold plated while holding the equipment
- PC11.** regulate soldering temperature throughout the process to maintain consistency
- PC12.** maintain solder stations as per the start and stop procedure

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** risk and impact of not following defined procedures/work instructions and timeline
- KU2.** escalation matrix for reporting identified incidents, troubles and/or emergencies
- KU3.** records to be maintained and implications of non-maintenance of the same



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- KU4.** Safety Health and Environment (SHE) and Occupational Health and Safety (OHS) guidelines and regulations as per company norms
- KU5.** impact of contamination of Printed Circuit Boards (PCBs), components and soldering material
- KU6.** cleaning procedures and processes
- KU7.** operational characteristics of soldering stations
- KU8.** impact of temperature and humidity on the process
- KU9.** process of CAD diagram preparation, soldering, component placement specifications

Generic Skills (GS)

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

- GS1.** read and interpret necessary documents
- GS2.** read and understand manuals, requirement documents, operational health and safety instructions, memos, reports etc.
- GS3.** read and comprehend/understand material specifications
- GS4.** communicate with colleagues, peers and supervisor
- GS5.** liaise and coordinate with third party vendors/other stakeholders

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare board and material/components</i>	16	31	-	13
PC1. analyse Computer-aided Design (CAD) specifications	2	3	-	2
PC2. set the soldering jig/fixture as per the work specifications	2	4	-	2
PC3. gather all components to be soldered as per the specifications	2	4	-	2
PC4. set the temperature as per the work and component specifications and measure the same using sensors	2	5	-	2
PC5. select the correct solder bit and soldering wire for the given work	2	5	-	2
PC6. clean solder bits, component leads and boards of any contamination	2	4	-	1
PC7. clean the solder wire of any contamination	2	3	-	1
PC8. select the correct flux as per specifications	2	3	-	1
<i>Soldering of Components on Boards</i>	9	24	-	7
PC9. undertake correct placement and orientation of components	1	5	-	1
PC10. demonstrate amount of solder feeding application, sufficient flux addition, correct positioning and vector speed of nozzle, no solder on gold plated while holding the equipment	4	8	-	2
PC11. regulate soldering temperature throughout the process to maintain consistency	2	6	-	2
PC12. maintain solder stations as per the start and stop procedure	2	5	-	2
NOS Total	25	55	-	20

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N2500
NOS Name	High Density Hand Soldering of Components on Telecom Boards
Sector	Telecom
Sub-Sector	Handset
Occupation	Communication Electronics
NSQF Level	4
Credits	4
Version	3.0
Last Reviewed Date	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

Qualification Pack

TEL/N2501: Rework on Defects and Undertake Selective Soldering

Description

This OS unit is about rework on defects and selective soldering of components on telecom boards.

Scope

The scope covers the following :

- Verification of completed board against specifications
- Selective soldering and rework

Elements and Performance Criteria

Verification of completed board against specifications

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

- PC1.** identify (from software library/system) the correct CAD and BOM vis-a-vis the board to be verified
- PC2.** map the on-board components vis-a-vis CAD specifications for correct placement and orientation and demonstrate the same
- PC3.** ascertain values and specifications of the components vis-a-vis the drawings/work order
- PC4.** demonstrate ability to check defects (excess burr in component base, visible damages to the board and components, solder shorts, pin holes/ blow holes, spikes, peaks, gold fingers and dry solder)
- PC5.** analyse result of functional checks of the board

Selective soldering and re-work

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

- PC6.** identify/mark all components to be reworked/resoldered
- PC7.** ascertain if same component can be reused or source a replacement
- PC8.** resolder as per the soldering process

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** work/project management concepts and applications
- KU2.** procedure for drawing components/drawings
- KU3.** escalation matrix for reporting non-compliance
- KU4.** process and work records to be maintained
- KU5.** Safety Health and Environment (SHE) and Occupational Health and Safety (OHS) guidelines and regulations as per company norms
- KU6.** proper soldering techniques and soldering specifications
- KU7.** use of correct tools and materials for rework/resoldering



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- KU8.** reading/verifying components under microscope to check correct placement and connectivity (no bend pins/legs etc)
- KU9.** ESD precautions and hygiene

Generic Skills (GS)

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

- GS1.** read and interpret technical literature/requirements
- GS2.** read and understand manuals, requirement documents, operational health and safety instructions, memos, reports etc.
- GS3.** read and comprehend/understand material specifications
- GS4.** liaise and coordinate with third party vendors/other stakeholders
- GS5.** communicate with colleagues, peers, management and stakeholders

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Verification of completed board against specifications</i>	16	37	-	14
PC1. identify (from software library/system) the correct CAD and BOM vis-a-vis the board to be verified	3	7	-	2
PC2. map the on-board components vis-a-vis CAD specifications for correct placement and orientation and demonstrate the same	3	9	-	3
PC3. ascertain values and specifications of the components vis-a-vis the drawings/work order	2	6	-	3
PC4. demonstrate ability to check defects (excess burr in component base, visible damages to the board and components, solder shorts, pin holes/ blow holes, spikes, peaks, gold figures and dry solder)	5	9	-	4
PC5. analyse result of functional checks of the board	3	6	-	2
<i>Selective soldering and re-work</i>	9	18	-	6
PC6. identify/mark all components to be reworked/resoldered	3	6	-	2
PC7. ascertain if same component can be reused or source a replacement	3	6	-	2
PC8. resolder as per the soldering process	3	6	-	2
NOS Total	25	55	-	20

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N2501
NOS Name	Rework on Defects and Undertake Selective Soldering
Sector	Telecom
Sub-Sector	Handset
Occupation	Communication Electronics
NSQF Level	3
Credits	3
Version	3.0
Last Reviewed Date	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

Qualification Pack

TEL/N2502: Cleaning and Inspection of Telecom Boards

Description

This OS unit is about cleaning and inspection of completed telecom boards.

Scope

The scope covers the following :

- Cleaning of telecom boards
- Inspection - Quality checks and assurance

Elements and Performance Criteria

Cleaning of telecom boards

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

- PC1.** demonstrate ability to clean the board from flux residues, white patches and/or powder, using correct and specified solvent
- PC2.** operate vapor de-greaser (boil, rinse, vapourize and dry) to clean the boards
- PC3.** demonstrate safe packaging and storage of telecom boards, using the specified wrapping material

Inspection - qualitychecks and assurance

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

- PC4.** demonstrate ability to check telecom boards for any missing components, wrongly mounted components (location, value) or improper placement, vis-vis the specifications
- PC5.** demonstrate ability to check the telecom boards for soldering workmanship and defects, proper placement of board identifier, adherence to specifications, conformal coatings
- PC6.** demonstrate complaint handling and escalation processes
- PC7.** undertake checks of shop floor with respect to adherence to the processes and parameters (temperature, humidity)

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** work/project management concepts and applications
- KU2.** risk and impact of not following defined procedures/work instructions
- KU3.** escalation matrix for reporting identified incidents, issues and/or emergencies e.g. system failures, fire and power failures
- KU4.** records to be maintained and implications of non-maintenance of the same
- KU5.** Safety Health and Environment (SHE) and Occupational Health and Safety (OHS) guidelines and regulations as per company norms
- KU6.** use of cleaning chemicals/solvents for PCBs
- KU7.** process of cleaning



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- KU8.** use of vapour de freezer equipment for PCB cleaning
- KU9.** QA/QC parameters relating to the manual soldering
- KU10.** IPC standards of soldering

Generic Skills (GS)

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

- GS1.** read and interpret necessary documents
- GS2.** read and understand manuals, requirement documents, operational health and safety instructions, memos, reports etc.
- GS3.** read and comprehend/understand material specifications
- GS4.** communicate with colleagues, peers and supervisor
- GS5.** liaise and coordinate with third party vendors/other stakeholders

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Cleaning of telecom boards</i>	10	29	-	4
PC1. demonstrate ability to clean the board from flux residues, white patches and/or powder, using correct and specified solvent	3	10	-	1
PC2. operate vapor de-greaser (boil, rinse, vapourize and dry) to clean the boards	3	9	-	1
PC3. demonstrate safe packaging and storage of telecom boards, using the specified wrapping material	4	10	-	2
<i>Inspection - qualitychecks and assurance</i>	20	31	-	6
PC4. demonstrate ability to check telecom boards for any missing components, wrongly mounted components (location, value) or improper placement, vis-vis the specifications	7	7	-	2
PC5. demonstrate ability to check the telecom boards for soldering workmanship and defects, proper placement of board identifier, adherence to specifications, conformal coatings	6	9	-	2
PC6. demonstrate complaint handling and escalation processes	3	7	-	1
PC7. undertake checks of shop floor with respect to adherence to the processes and parameters (temperature, humidity)	4	8	-	1
NOS Total	30	60	-	10

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N2502
NOS Name	Cleaning and Inspection of Telecom Boards
Sector	Telecom
Sub-Sector	Handset
Occupation	Communication Electronics
NSQF Level	4
Credits	3
Version	4.0
Last Reviewed Date	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

Qualification Pack

TEL/N9101: Organize Work and Resources as per Health and Safety Standards

Description

This OS unit is about planning work and following sustainable as well as healthy practices for safety and optimal use of resources.

Scope

The scope covers the following :

- Perform work as per quality standards
- Maintain safe, healthy and secure working environment
- Conserve material/energy/electricity
- Use effective waste management/recycling practices

Elements and Performance Criteria

Perform work as per quality standards

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

- PC1.** keep workspace clean and tidy
- PC2.** perform individual role and responsibilities as per the job role while taking accountability for the work
- PC3.** record/document tasks completed as per the requirements within specific timelines
- PC4.** implement schedules to ensure timely completion of tasks
- PC5.** identify the cause of a problem related to own work and validate it
- PC6.** analyse problems accurately and communicate different possible solutions to the problem

Maintain safe, healthy and secure working environment

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

- PC7.** comply with organisation's current health, safety, security policies and procedures
- PC8.** check for water spills in and around the work space and escalate these to the appropriate authority
- PC9.** report any identified breaches in health, safety, and security policies and procedures to the designated person
- PC10.** use safety materials such as goggles, gloves, ear plugs, caps, ESD pins, covers, shoes, etc.
- PC11.** avoid damage of components due to negligence in ESD procedures or any other loss due to safety negligence
- PC12.** identify hazards such as illness, accidents, fires or any other natural calamity safely, as per organisation's emergency procedures, within the limits of individual's authority
- PC13.** participate regularly in fire drills or other safety related workshops organised by the company
- PC14.** report any hazard outside the individual's authority to the relevant person in line with organisational procedures and warn others who may be affected

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- PC15.** maintain appropriate posture while sitting/standing for long hours
- PC16.** handle heavy and hazardous materials with care, while maintaining appropriate posture
- PC17.** sanitize workstation and equipment regularly
- PC18.** clean hands with soap, alcohol-based sanitizer regularly
- PC19.** avoid contact with anyone suffering from communicable diseases and take necessary precautions
- PC20.** take safety precautions while travelling e.g. maintain 1m distance from others, sanitize hands regularly, wear masks, etc.
- PC21.** report hygiene and sanitation issues to appropriate authority
- PC22.** follow recommended personal hygiene and sanitation practices, for example, washing/sanitizing hands, covering face with a bent elbow while coughing/sneezing, using PPE, etc.

Conserve material/energy/electricity

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

- PC23.** optimize usage of material including water in various tasks/activities/processes
- PC24.** use resources such as water, electricity and others responsibly
- PC25.** carry out routine cleaning of tools, machine and equipment
- PC26.** optimize use of electricity/energy in various tasks/activities/processes
- PC27.** perform periodic checks of the functioning of the equipment/machine and rectify wherever required
- PC28.** report malfunctioning and lapses in maintenance of equipment
- PC29.** use electrical equipment and appliances properly

Use effective waste management/recycling practices

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

- PC30.** identify recyclable, non-recyclable and hazardous waste
- PC31.** deposit recyclable and reusable material at identified location
- PC32.** dispose non-recyclable and hazardous waste as per recommended processes

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** strategies pertinent to their field (such as internet searches, asking peers and managers, enrolling for courses and certifications, etc.) that can be used to pursue an advancement in their skills
- KU2.** key performance indicators for the new tasks
- KU3.** feedback processes and formats
- KU4.** timelines and goals as well as their relevance to work allocated
- KU5.** importance of quality and timely delivery of the product/service
- KU6.** escalation matrix and its importance, especially in case of emergencies
- KU7.** ways of time and cost management
- KU8.** rules/regulation for maintaining health and safety at workplace

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- KU9.** meaning of hazard, different types of health and safety hazards found in the workplace, risks and threats based on the nature of work
- KU10.** relevant signage, warnings, labels or descriptions on equipment, etc. while carrying out work activities
- KU11.** procedures to report breaches in health, safety and security
- KU12.** organisation's procedures for different emergency situations and the importance of following the same
- KU13.** different methods of cleaning, disinfection, sterilization, and sanitization
- KU14.** significance of personal hygiene practice including hand hygiene
- KU15.** path of disease transmission
- KU16.** correct method of donning and doffing of PPE
- KU17.** ways of managing resources and material efficiently
- KU18.** common electrical problems and common practices of conserving electricity
- KU19.** categorization of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics and use of different colours of dustbins
- KU20.** organisation's procedures for minimizing waste
- KU21.** waste management and methods of waste disposal
- KU22.** common sources of pollution and ways to minimize it

Generic Skills (GS)

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

- GS1.** improve and modify work practices
- GS2.** complete tasks efficiently and accurately within stipulated time
- GS3.** develop skills and mastery of the technologies prevalent in the industry
- GS4.** write in at least one language and complete written work with attention to detail
- GS5.** utilize time and manage workload efficiently
- GS6.** read and comprehend instructions and documents
- GS7.** accept feedback in a constructive way
- GS8.** seek clarifications from superior about the job requirement
- GS9.** read and comprehend statutory documents relevant to safety and hygiene
- GS10.** refer all anomalies to the concerned persons
- GS11.** analyze situations and make appropriate decisions
- GS12.** decide the most suitable course of action for completing the task within resources

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform work as per quality standards</i>	4	9	-	2
PC1. keep workspace clean and tidy	-	1	-	-
PC2. perform individual role and responsibilities as per the job role while taking accountability for the work	1	1	-	1
PC3. record/document tasks completed as per the requirements within specific timelines	-	1	-	1
PC4. implement schedules to ensure timely completion of tasks	-	2	-	-
PC5. identify the cause of a problem related to own work and validate it	2	2	-	-
PC6. analyse problems accurately and communicate different possible solutions to the problem	1	2	-	-
<i>Maintain safe, healthy and secure working environment</i>	16	27	-	4
PC7. comply with organisation's current health, safety, security policies and procedures	1	1	-	-
PC8. check for water spills in and around the work space and escalate these to the appropriate authority	1	2	-	1
PC9. report any identified breaches in health, safety, and security policies and procedures to the designated person	1	2	-	1
PC10. use safety materials such as goggles, gloves, ear plugs, caps, ESD pins, covers, shoes, etc.	1	2	-	1
PC11. avoid damage of components due to negligence in ESD procedures or any other loss due to safety negligence	2	3	-	1
PC12. identify hazards such as illness, accidents, fires or any other natural calamity safely, as per organisation's emergency procedures, within the limits of individual's authority	2	1	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. participate regularly in fire drills or other safety related workshops organised by the company	1	3	-	-
PC14. report any hazard outside the individual's authority to the relevant person in line with organisational procedures and warn others who may be affected	1	3	-	-
PC15. maintain appropriate posture while sitting/standing for long hours	1	1	-	-
PC16. handle heavy and hazardous materials with care, while maintaining appropriate posture	1	1	-	-
PC17. sanitize workstation and equipment regularly	1	2	-	-
PC18. clean hands with soap, alcohol-based sanitizer regularly	-	1	-	-
PC19. avoid contact with anyone suffering from communicable diseases and take necessary precautions	-	1	-	-
PC20. take safety precautions while travelling e.g. maintain 1m distance from others, sanitize hands regularly, wear masks, etc.	1	2	-	-
PC21. report hygiene and sanitation issues to appropriate authority	1	1	-	-
PC22. follow recommended personal hygiene and sanitation practices, for example, washing/sanitizing hands, covering face with a bent elbow while coughing/sneezing, using PPE, etc.	1	1	-	-
<i>Conserve material/energy/electricity</i>	7	16	-	3
PC23. optimize usage of material including water in various tasks/activities/processes	1	2	-	-
PC24. use resources such as water, electricity and others responsibly	1	2	-	1
PC25. carry out routine cleaning of tools, machine and equipment	1	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC26. optimize use of electricity/energy in various tasks/activities/processes	1	3	-	1
PC27. perform periodic checks of the functioning of the equipment/machine and rectify wherever required	1	3	-	1
PC28. report malfunctioning and lapses in maintenance of equipment	1	2	-	-
PC29. use electrical equipment and appliances properly	1	2	-	-
<i>Use effective waste management/recycling practices</i>	3	8	-	1
PC30. identify recyclable, non-recyclable and hazardous waste	1	2	-	1
PC31. deposit recyclable and reusable material at identified location	1	3	-	-
PC32. dispose non-recyclable and hazardous waste as per recommended processes	1	3	-	-
NOS Total	30	60	-	10

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National Occupational Standards (NOS) Parameters

NOS Code	TEL/N9101
NOS Name	Organize Work and Resources as per Health and Safety Standards
Sector	Telecom
Sub-Sector	Generic
Occupation	Generic
NSQF Level	4
Credits	1
Version	2.0
Last Reviewed Date	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

Qualification Pack

TEL/N9102: Interact Effectively with Team Members and Customers

Description

This OS unit is about interacting with superiors and colleagues as well as customers and other stakeholders in own or other work groups within as well as outside the organisation.

Scope

The scope covers the following :

- Interact effectively with superiors
- Interact effectively with colleagues and customers
- Respect differences of gender and ability

Elements and Performance Criteria

Interact effectively with superiors

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

- PC1.** receive work requirements from superiors and customers and interpret them correctly
- PC2.** inform the supervisor and/or concerned person about any unforeseen disruptions or delays
- PC3.** participate in decision making by providing facts and figures, giving/accepting constructive suggestions
- PC4.** rectify errors as per feedback and ensure the errors are not repeated

Interact effectively with colleagues and customers

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

- PC5.** comply with organisation's policies and procedures for working with team members
- PC6.** communicate professionally using appropriate mode of communication such as face-to-face, telephonic and written
- PC7.** respond to queries and seek/provide clarifications if required
- PC8.** co-ordinate with team to integrate work as per requirements
- PC9.** resolve conflicts within the team/with customers to achieve smooth workflow
- PC10.** recognize emotions accurately in self and others to build good relationships
- PC11.** prioritize team and organization goals above personal goals

Respect differences of gender and ability

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

- PC12.** maintain a conducive environment for all the genders at the workplace
- PC13.** encourage appropriate behavior and conduct with people across gender
- PC14.** assist team members with disability in overcoming any challenges faced in work
- PC15.** practice appropriate verbal and non-verbal communication while interacting with People with Disability (PwD)
- PC16.** ensure equal participation of the people across genders in discussions

Knowledge and Understanding (KU)

Qualification Pack

The individual on the job needs to know and understand:

- KU1.** organisation's policies on dress code, workplace timings, workplace behaviour, performance management, incentives, delivery standards, information security, etc.
- KU2.** organisation's hierarchy and escalation matrix
- KU3.** importance of establishing good working relationships with colleagues and superiors
- KU4.** importance of helping colleagues with problems, in order to meet quality and time standards as a team
- KU5.** different means and methods of communication
- KU6.** different types of information that colleagues might need and the importance of providing this information in an appropriate manner
- KU7.** organisation's policies and procedures for working with colleagues and superiors
- KU8.** importance of understanding consequences of gender biased behaviour
- KU9.** gender based concepts, issues and legislation
- KU10.** organisation standards and guidelines to be followed for PwD and knowledge about laws, acts and provisions defined for PwD by the statutory bodies and the right way to use them including various medical conditions associated with PwD
- KU11.** health and safety requirements at workplace for PwD
- KU12.** process of recruiting people for a particular job profile w.r.t PwD and gender
- KU13.** various government/private schemes and benefits available for PwD and information about various institutes working for PwD to enable in providing livelihood opportunities for PwD

Generic Skills (GS)

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

- GS1.** read and comprehend forms, documents and records
- GS2.** read and write in English and/or local language
- GS3.** complete work with attention to detail
- GS4.** listen effectively and orally communicate information
- GS5.** work as per customer requirements
- GS6.** communicate with empathy across genders and PwD
- GS7.** improve and modify work practices
- GS8.** maintain positive and effective relationships with colleagues and customers
- GS9.** evaluate the possible solution(s) to the problem

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interact effectively with superiors</i>	7	15	-	2
PC1. receive work requirements from superiors and customers and interpret them correctly	1	2	-	-
PC2. inform the supervisor and/or concerned person about any unforeseen disruptions or delays	2	4	-	1
PC3. participate in decision making by providing facts and figures, giving/accepting constructive suggestions	2	5	-	1
PC4. rectify errors as per feedback and ensure the errors are not repeated	2	4	-	-
<i>Interact effectively with colleagues and customers</i>	7	26	-	4
PC5. comply with organisation's policies and procedures for working with team members	1	2	-	-
PC6. communicate professionally using appropriate mode of communication such as face-to-face, telephonic and written	2	4	-	1
PC7. respond to queries and seek/provide clarifications if required	2	4	-	1
PC8. co-ordinate with team to integrate work as per requirements	-	3	-	-
PC9. resolve conflicts within the team/with customers to achieve smooth workflow	1	5	-	1
PC10. recognize emotions accurately in self and others to build good relationships	1	4	-	-
PC11. prioritize team and organization goals above personal goals	-	4	-	1
<i>Respect differences of gender and ability</i>	11	24	-	4
PC12. maintain a conducive environment for all the genders at the workplace	2	5	-	1

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. encourage appropriate behavior and conduct with people across gender	2	5	-	1
PC14. assist team members with disability in overcoming any challenges faced in work	3	4	-	1
PC15. practice appropriate verbal and non-verbal communication while interacting with People with Disability (PWD)	2	4	-	1
PC16. ensure equal participation of the people across genders in discussions	2	6	-	-
NOS Total	25	65	-	10

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	TEL/N9102
NOS Name	Interact Effectively with Team Members and Customers
Sector	Telecom
Sub-Sector	Generic
Occupation	Generic
NSQF Level	4
Credits	1
Version	2.0
Last Reviewed Date	NA
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

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

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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

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

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each 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.

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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
TEL/N2500.High Density Hand Soldering of Components on Telecom Boards	25	55	-	20	100	20
TEL/N2501.Rework on Defects and Undertake Selective Soldering	25	55	-	20	100	20
TEL/N2502.Cleaning and Inspection of Telecom Boards	30	60	-	10	100	20
TEL/N9101.Organize Work and Resources as per Health and Safety Standards	30	60	-	10	100	15
TEL/N9102.Interact Effectively with Team Members and Customers	25	65	-	10	100	15
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	10
Total	155	325	-	70	550	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.