Model Curriculum

QP Name: Technician - Last Mile Active Network

QP Code: TEL/Q6101

Version: 3.0

NSQF Level: 4

Model Curriculum Version: 3.0

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Telecom Sector Skill Council

Skill India

N·S·D·C National Skill Development Corporation
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Training Parameters

Sector	Telecom
Sub-Sector	Network Managed Services
Occupation	Network (Active Components) Installation
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3114.6101
Minimum Educational Qualification and Experience	12th grade pass OR Completed 2nd year of 3-year diploma (after 10th) ** OR Previous relevant Qualification of NSQF Level 3.5 with 1.5 - year relevant experience* OR Previous relevant Qualification of NSQF Level 3 with 3- year relevant experience* **Relevant experience in installation, maintenance, and troubleshooting of active network components (e.g., modems, routers, switches, fiber nodes) in last mile connectivity for broadband, fiber-to-the-home (FTTH), or telecom service networks.* ***Diploma in Electronics and Communication, Electrical, Telecom, CS/IT or any related field*
Pre-Requisite License or Training	NA
Minimum Job Entry Age	NA
Last Reviewed On	19-Aug-2025
Next Review Date	30-June-2028
NSQC Approval Date	19-Aug-2025
QP Version	3.0
Model Curriculum Creation Date	19-Aug-2025
Model Curriculum Valid Up to Date	30-June-2028

Model Curriculum Version	3.0
Minimum Duration of the Course	450 Hours
Maximum Duration of the Course	450 Hours

Program Overview

This section summarises the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills to:

- Illustrate the architecture, components, and functioning of last mile connectivity within wired and wireless broadband networks, including ONT, OLT, fibre terminations, splitters, routers, and CPEs.
- Perform routine maintenance and basic troubleshooting of last mile active network devices, such as signal testing, checking power and link status, rebooting, or replacing faulty equipment.
- Use handheld network testing tools (e.g., optical power meters, OTDRs, VFL, LAN testers) to assess link quality, verify port-level connectivity, and diagnose drop faults in fibre or copper lines.
- Implement safe handling and preventive maintenance practices for electronic devices, power adaptors, batteries, and fibre connectors to prevent service degradation or hazards.
- Maintain and update device configurations using vendor-specific interfaces (e.g., CLI/web GUI) and log all actions, device IDs, and parameter changes in maintenance reports or mobile apps.
- Coordinate with Network Operation Centres (NOCs) and field teams to escalate unresolved issues, follow up on service requests, and ensure restoration of network services in defined SLAs.
- Interpret network diagrams, fault tickets, and escalation reports to identify service coverage gaps and assist in future-proofing the last mile network for scalability and customer needs.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
TEL/N6109: Install the Local Area Network (LAN) and Wide Area Network (WAN) devices NOS Version- 3.0 NSQF Level- 4	**40:00**	**40:00**	**40:00**	**-**	**120:00**
Module 1: Introduction to the role of a Jr. Technician - Last Mile Active Network	10:00	00:00	00:00	-	10:00
Module 2: Install the Local Area Network (LAN) and Wide Area	30:00	40:00	40:00	-	110:00

Network (WAN) devices					
TEL/N6110: Set up and Configuration of Network Switch and Router NOS Version- 3.0 NSQF Level- 4	**30:00**	**50:00**	**40:00**	-	**120:00**
Module 3: Process of installing the LAN and WAN network devices	30:00	50:00	40:00	-	120:00
TEL/N6111: Carry out Maintenance of Network Devices NOS Version-3.0 NSQF Level- 4	**30:00**	**40:00**	**50:00**	-	**120:00**
Module 4: Process of setting up and configuring the network switch and router	30:00	40:00	50:00	-	120:00
TEL/N9101: Organise Work and Resources as per Health and Safety Standards NOS Version- 3.0 NSQF Level- 4	**10:00**	**10:00**	**10:00**	-	**30:00**
Module 5: Process of carrying out the maintenance of network devices	10:00	10:00	10:00	-	30:00
TEL/N9102: Interact Effectively with Team Members and Customers NOS Version- 3.0 NSQF Level- 4	**10:00**	**10:00**	**10:00**	-	**30:00**
Module 6: Process of organising work and resources as per health and Safety standards	10:00	10:00	10:00	-	30:00
DGT/VSQ/N0101: Employability Skills (30 Hours) NOS Version- 3.0 NSQF Level- 4	**30:00**	**-**	**-**	**-**	**30:00**
Module 7: Employability Skills (30 hours)	30:00	-	-	-	30:00

Total Duration	**150:00**	**150:00**	**150:00**	**-**	**450:00**

Module Details

Module 1: Introduction to the role of a Technician - Last Mile Active Network

Bridge Module TEL/N6109, v3.0

Terminal Outcomes:

- Discuss the job role of a Technician - Last Mile Active Network.
- Explain the scope of work for a Technician - Last Mile Active Network.

Duration: 10:00	**Duration: 00:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the size and scope of the Telecom industry and its sub-sectors. • Discuss the role and responsibilities of a Technician - Last Mile Active Network Installer. • Identify various employment opportunities for a Technician - Last Mile Active Network Installer. • Discuss the organisational policies on workplace ethics, managing sites, quality standards, personnel management and public relations (PR). • Describe the process workflow in the organization and the role of Technician - Last Mile Active Network Installer in the process. • List the various daily, weekly, monthly operations/activities that take place at the site under a Technician - Last Mile Active Network Installer.	
Classroom Aids	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
NA	

Module 2: Install the Local Area Network (LAN) and Wide Area Network (WAN) devices

Mapped to NOS: TEL/N6109, v3.0

Terminal Outcomes:

- Interpret technical drawings, network layouts, and work instructions to plan the installation and configuration of network switches and routers accurately.
- Inspect and verify network devices and accessories for completeness and physical condition prior to installation as per the Bill of Material (BoM).
- Configure routers and switches by assigning correct ports, VLANs, IP addresses, subnet masks, gateways, and DNS settings to establish functional LAN and WAN connections.
- Test network connectivity and performance using diagnostic tools (e.g., ping test, LAN tester) and document all configurations and test results for operational traceability.

Duration: 30:00	**Duration: 40:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of receiving clear work instructions, technical drawings, and layout plans before beginning the installation process of LAN and WAN networks. • Describe different types of network devices such as routers, switches, access points, and modems, and explain their role in LAN and WAN setup. • Interpret network diagrams, IP schemas, and cable routing plans to understand device placement and interconnection logic. • Explain the need for physical inspection of network devices and accessories before installation to detect damages or missing components as per the Bill of Material (BoM). • Describe structured cabling standards, cable types (Cat5e, Cat6, Fibre), and their selection based on bandwidth and distance requirements. • Explain the key network parameters (e.g., IP address, subnet mask, default gateway, DNS) required for basic device configuration. • Discuss safety precautions, including	• Demonstrate the process of interpreting technical drawings, network layouts, and selecting appropriate network devices for LAN/WAN installation. • Show how to unbox, inspect, and verify the completeness of network hardware as per BoM before installation. • Demonstrate how to connect and configure routers, switches, and access points, assigning appropriate ports, VLANs, and IP settings. • Demonstrate the installation of wireless access points, including SSID setup, channel selection, and security configuration. • Show how to measure, cut, and crimp Ethernet cables using tools like crimpers, cable strippers, and RJ45 connectors. • Demonstrate the proper routing and installation of cables in ducts or conduits, ensuring secure and strain-free connections. • Apply suitable technique to label and tag cables and ports as per colour codes or tags to aid in troubleshooting and maintenance. • Demonstrate the use of LAN testers, cable certifiers, and network diagnostic tools to test connectivity, cable quality, and internet

grounding, bonding, and secure cable routing practices, to prevent hazards and ensure stable network performance. ● Explain the procedures and significance of documenting network configurations, test results, MAC/IP addresses, and customer sign-offs.	access. ● Perform a ping test, speed test, and basic troubleshooting to verify network performance. ● Conduct documentation of network results.
Classroom Aids:	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
Crimping tool, cable tester, LAN tester, TDR meter, Ethernet cables, pigtail, fibre optic cables, RJ45 connectors, patch panels, switches, routers, access points, Cable tags, labels, zip ties, and mounting brackets, Personal Protective Equipment (PPE), Screwdrivers, wire strippers, drills, Network simulator (optional).	

Module 3: Set up and Configuration of Network Switch and Router

Mapped to NOS: TEL/N6110, v3.0

Terminal Outcomes:

- Identify and select appropriate switches and routers based on network requirements and device specifications.
- Explain basic network settings on switches and routers, including IP addressing, subnet masks, VLAN assignments, and gateway parameters.
- Apply standard procedures to connect and integrate switches and routers within the existing LAN/WAN infrastructure.
- Demonstrate troubleshooting of common configuration issues.

Duration: 30:00	**Duration: 50:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of verifying the availability and compatibility of networking hardware such as managed/unmanaged switches, routers, cables, and connectors before beginning installation. • Describe the functions of tools such as crimping tools, LAN testers, punch-down tools, and console cables used for switch and router setup. • Interpret network design documents and topology diagrams to understand device roles, VLAN configuration, and IP addressing schemes. • Illustrate the significance of configuring switches and routers with basic settings such as IP addresses, hostnames, and access credentials for device identification and security. • Describe VLAN configuration, trunk/access port setup, and routing protocol basics such as RIP and OSPF in relation to LAN/WAN performance. • Explain common security features in network devices, such as MAC filtering, ACLs, port security, and their role in protecting data flow. • Outline procedures for validating connectivity using tools like ping, traceroute, and for backing up	• Demonstrate how to inspect and prepare switches, routers, cables, connectors, and power supplies for installation. • Display the process of mounting network switches and routers securely in wall enclosures or server racks, ensuring proper cable routing and airflow. • Show how to connect Ethernet or fibre cables as per port allocation. • Demonstrate how to verify physical cable integrity and labelling using LAN cable testers and colour-coded mapping. • Demonstrate console-based access to switches and routers using terminal emulators such as PuTTY or Tera Term for initial configuration. • Show how to configure static/dynamic IP addresses, hostnames, default gateways, and DNS parameters on both switches and routers. • Demonstrate VLAN creation, trunk and access port setup, and basic inter-VLAN routing on managed switches. • Demonstrate the process of applying security configurations such as enabling port security, STP, ACLs, and NAT on network devices. • Show how to validate configuration and connectivity using command-line

configurations through TFTP/FTP or external drives.	diagnostics (e.g., ping, traceroute, show IP INT brief) and perform basic troubleshooting and log review. ● Demonstrate the steps to back up and restore configuration files to and from USB or network storage devices.
Classroom Aids:	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
Managed/unmanaged switches (Layer 2 and 3), Wired/wireless routers, Ethernet cables and fibre patch cords, Crimping tools, punch-down tools, LAN cable testers, Console cables (serial, USB), Terminal emulator software (PuTTY, Tera Term), USB drives, TFTP/FTP server setup, Power supply units and UPS, Rack enclosures or wall-mounted trays.	

Module 4: Carry out Maintenance of Network Devices

Mapped to NOS: TEL/N6111, v3.0

Terminal Outcomes:

- Analyse the network layout diagrams, inventory records, and site plans to plan and prepare for the maintenance of LAN and WAN devices effectively.
- Apply inspection techniques to identify physical damages, loose terminations, or overheating issues in routers, switches, ONT/ONU, and related accessories.
- Demonstrate the use of diagnostic tools such as LAN testers, OTDRs, and mobile apps to troubleshoot common network faults like packet loss or signal degradation.
- Evaluate post-maintenance performance and document the completed tasks, replaced components, and network health indicators using standard formats or digital tools.

Duration: 30:00	**Duration: 40:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of reviewing the network layout diagram, device inventory, and site plan before beginning any installation or maintenance task. • Describe the key functions and types of network devices such as routers, switches, ONT/ONU, and access points used in LAN/WAN environments. • Explain the need for carrying out site inspection and safety checks before installation to prevent hazards and ensure accessibility. • Describe the procedure for inspecting network devices and accessories for physical damage, loose terminations, and signs of malfunction. • Explain common network faults such as packet loss, poor signal strength, and latency issues, along with their impact on network performance. • Outline the selection criteria and usage of diagnostic tools such as multimeters, LAN testers, OTDRs, and loopback plugs for network fault identification. • Explain the procedure for updating device firmware and basic configuration through CLI or GUI for various vendor	• Demonstrate how to inspect LAN/WAN network devices and related accessories for physical damage, overheating, and cable stress before installation. • Demonstrate how to connect and configure devices such as routers, switches, and ONUs based on site layout and connection plans. • Show how to use testing tools such as LAN testers, ping commands, and mobile apps to verify connectivity and troubleshoot network faults. • Demonstrate the replacement of faulty components like patch cords, power adapters, SFP modules, or connectors as per standard procedures. • Demonstrate how to clean optical ports, tighten loose terminations, and perform splicing of fibre cables to restore link continuity. • Perform testing of post-maintenance performance metrics such as throughput, signal quality, and latency using handheld testers. • Demonstrate the updating of firmware or software configurations in routers and CPEs using command line or interface-based tools.

platforms. ● Describe the maintenance and documentation protocol including replacement logging, port status records, and escalation practices.	● Record and report all maintenance actions, component replacements, and test results in standard documentation formats or mobile platforms.
Classroom Aids:	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
Screwdrivers, pliers, cable cutters), LAN tester and crimping tool, Fibre cleaver, stripper, and cleaning kit, Low-cost OTDR or Visual Fault Locator (VFL), Multimeter and loopback plug, Routers, switches, and ONT/ONU devices, Ethernet and fibre patch cords, Battery backup (UPS) units, Label printer or marker pens.	

Module 5: Organise Work and Resources as per Health and Safety Standards

Mapped to NOS: TEL/N9101, v3.0

Terminal Outcomes:

- Demonstrate how to maintain an organised, clutter-free, and ergonomically safe workspace aligned with 5S and organisational SOPs.
- Apply standard health, safety, and environmental (HSE) practices, including hazard detection, PPE usage, and incident reporting as per workplace protocols.
- Use safe material handling, energy conservation techniques, and equipment maintenance procedures to ensure resource-efficient and risk-free operations.
- Perform systematic waste segregation and disposal in compliance with hazardous and e-waste guidelines.

Duration: 10:00	**Duration: 10:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the principles and importance of 5S methodology for workplace organisation. • Illuminate on the organisational SOPs related to workflow management, task allocation, and quality assurance. • Comprehend health, safety, and environmental policies, including national/international standards like ISO 45001 and ISO 14001. • Recognise common workplace hazards such as ESD, fire risks, electrical faults, and EMI interference, as well as their potential impacts. • Discuss different types and correct uses of personal protective equipment (PPE) in a drone maintenance environment. • Discuss various energy conservation practices relevant to lighting, HVAC, and equipment usage. • Explain the role and benefits of digital tools for logging, task management, and inventory control in a workplace organisation.	• Demonstrate how to organise and maintain a clean, clutter-free, and ergonomically safe workspace in compliance with 5S principles. • Use digital platforms or apps to log work progress, record material consumption, and update task checklists accurately. • Apply organisational SOPs to follow designated workflows and escalate delays or material shortages. • Show correct selection, usage, and disposal of PPE while handling drones, tools, and hazardous materials. • Role-play to report workplace hazards such as spills, loose wiring, or EMI sources in real time. • Perform safe lifting, equipment handling, and maintain correct posture during physical tasks to prevent injury. • Conduct lockout/tagout procedures before servicing electrical or moving drone components. • Demonstrate safe battery handling, charging, and storage processes using approved methods and equipment. • Demonstrate safe manual handling techniques, workstation ergonomics, and first aid basics for workplace injuries.

	• Perform energy conservation actions such as switching off unused equipment and reporting any malfunctioning devices. • Employ appropriate techniques to segregate and dispose of waste correctly into hazardous, recyclable, and e-waste bins following SOPs. • Role-play effective communication of safety breaches, incidents, or health symptoms to supervisors or authorities promptly.
Classroom Aids	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
ESD Wrist Straps, PPE (gloves, goggles, reflective vests, Safety boots), First Aid Kit, Waste Bins (Recyclable, Non-recyclable, Hazardous), Fire Extinguisher, Digital Logbook or Task Management App, Mobile/Tablet Device, Sample E-waste Materials, Cleaning Supplies, Tool Trolley, Lockout/Tagout equipment	

Module 6: Interact Effectively with Team Members and Customers

Mapped to NOS: TEL/N9102, v3.0

Terminal Outcomes:

- Demonstrate effective communication with supervisors, stakeholders, and team members using appropriate verbal, non-verbal, and digital tools.
- Collaborate with team members to resolve conflicts, support inclusivity, and achieve shared goals in hybrid or in-person work environments.
- Apply emotional intelligence and cultural sensitivity while interacting with customers, colleagues, and persons with disabilities (PwDs).
- Role-play workplace situations involving feedback reception, conflict de-escalation, and inclusive participation to build a respectful work culture.

Duration: 10:00	**Duration: 10:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the organisational hierarchy and the roles and responsibilities of supervisors, team members, and stakeholders. • Describe professional etiquette for verbal, non-verbal, and digital communication in face-to-face and remote settings. • Explain the importance of clear communication, active listening, and timely information sharing at the workplace. • List commonly used communication tools (e.g., emails, messaging apps, video conferencing platforms) and their features. • Explain methods for giving and receiving feedback constructively within a professional context. • Identify common challenges faced by Persons with Disabilities (PwDs) and strategies for supporting them in the workplace. • Summarise the legal and organisational policies on diversity, equity, and inclusion. • Explain techniques for preventing and resolving conflicts through respectful	• Demonstrate professional communication with supervisors or clients through various tools like email, chat, or virtual meetings. • Role-play a workplace situation where feedback is received and acted upon constructively to improve performance. • Apply emotional intelligence principles during group activities or customer interactions to build rapport and cooperation. • Engage appropriate conflict resolution techniques to de-escalate disagreements and restore team harmony. • Display inclusive behaviour, cultural sensitivity, and emotional intelligence while interacting with people from diverse backgrounds and PwDs. • Role-play to collaborate with peers on group tasks, aligning with team goals while respecting individual contributions. • Conduct a virtual meeting adhering to digital etiquette, ensuring participation and accessibility for all. • Facilitate respectful team discussions

dialogue and escalation when necessary.	where all voices are heard, and equal opportunity for input is maintained.
Classroom Aids	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
Feedback forms, Communication tool, etc.	

Module 7: DGT/VSQ/N0101: Employability Skills (30 Hours)

Mandatory Duration: 30:00			
Location: On-Site			
S.No.	**Module Name**	**Key Learning Outcomes**	**Duration (hours)**
1.	Introduction to Employability Skills	• Discuss the importance of Employability Skills in meeting the job requirements	1 Hour
2.	Constitutional values - Citizenship	• Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. • Show how to practice different environmentally sustainable practices	1 Hour
3.	Becoming a Professional in the 21st Century	• Discuss 21st century skills. • Display positive attitude, self -motivation, problem solving, time management skills and continuous learning mindset in different situations.	1 Hour
4.	Basic English Skills	• Use appropriate basic English sentences/phrases while speaking	2 Hours
5.	Communication Skills	• Demonstrate how to communicate in a well - mannered way with others. • Demonstrate working with others in a team	4 Hours
6.	Diversity & Inclusion	• Show how to conduct oneself appropriately with all genders and PwD • Discuss the significance of reporting sexual harassment issues in time	1 Hour
7.	Financial and Legal Literacy	• Discuss the significance of using financial products and services safely and securely. • Explain the importance of managing expenses, income, and savings. • Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws	4 Hours
8.	Essential Digital Skills	• Show how to operate digital devices and use the associated applications and features, safely and securely • Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely	3 Hours
9.	Entrepreneurship	• Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges	7 Hours

10.	Customer Service	• Differentiate between types of customers • Explain the significance of identifying customer needs and addressing them • Discuss the significance of maintaining hygiene and dressing appropriately	4 Hours
11.	Getting ready for apprenticeship & Jobs	• Create a biodata • Use various sources to search and apply for jobs • Discuss the significance of dressing up neatly and maintaining hygiene for an interview • Discuss how to search and register for apprenticeship opportunities	2 Hours

LIST OF TOOLS & EQUIPMENT FOR EMPLOYABILITY SKILLS		
Sl No.	**Name of the Equipment**	**Quantity**
1	Computer (PC) with latest configurations – and Internet connection with standard operating system and standard word processor and worksheet software (Licensed) (all software should either be latest version or one/two version below)	As required
2	UPS	As required
3	Scanner cum Printer	As required
4	Computer Tables	As required
5	Computer Chairs	As required
6	LCD Projector	As required
7	White Board 1200mm x 900mm	As required
Note: Above Tools &Equipment not required, if Computer LAB is available in the institute.		

Module 8: On-the-Job Training

Mapped to QP: TEL/Q6101, v3.0

Mandatory Duration: 150:00	Recommended Duration: 00:00
Location: On-Site	

Terminal Outcomes

- Identify network devices at customer or distribution points based on layout diagrams and work instructions.
- Perform site inspection to ensure safety, accessibility, and readiness before initiating installation or maintenance.
- Verify availability and functionality of required tools and diagnostic equipment before field tasks.
- Install and configure routers, switches, access points, and ONT/ONUs as per technical specifications.
- Lay and terminate Ethernet and fibre optic cables adhering to bend radius and insertion protocols.
- Clean optical ports, connectors, and device surfaces using ESD-safe tools and standard kits.
- Check physical connections for signs of wear, stress, or damage and take corrective action.
- Conduct continuity and signal tests using LAN testers, multimeters, or OTDRs for fault identification.
- Perform firmware upgrades or configuration resets using GUI or CLI-based vendor interfaces.
- Replace faulty components like SFP modules, patch cords, power adaptors, and fuses with tested spares.
- Carry out basic splicing of drop fibre cables using fusion splicers or mechanical kits when required.
- Test connectivity performance including signal strength, speed, packet loss, and latency using mobile apps or handheld devices.
- Ensure correct port labelling, proper routing, and secure fastening of cables in racks or enclosures.
- Sync customer devices such as set-top boxes, IP phones, and routers with the active network line.
- Record service tasks, replaced parts, and test results accurately in logbooks or mobile service apps.
- Follow escalation procedures in case of unresolved faults or specialised equipment failures.
- Adhere to ESD and electrical safety standards while handling active or live devices.
- Assist senior technicians in documenting network layouts, connection paths, and service records.
- Maintain cleanliness and organisation of tools, accessories, and spares post-maintenance.
- Communicate effectively with users, team members, and supervisors during task execution.

Annexure

Trainer Requirements (Technician - Last Mile Active Network)

Trainer Pre-requisites						
Minimum Educational Qualification	**Specialisation**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialisation***	***Years***	***Specialisation***	
Diploma after 12th Class	Electronics and Communication / Telecom / Hardware & Networking / CS / IT	3	Field installation, configuration, and troubleshooting of last-mile active network components	1	Networking, telecom installation, or digital infrastructure	Eligible for ToT program
Graduation	Electronics and Communication / Telecom / Hardware & Networking / CS / IT	1	Field installation, configuration, and troubleshooting of last-mile active network components	1	Networking, telecom installation, or digital infrastructure	Eligible for ToT program

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "**Technician - Last Mile Active Network** ", " TEL/Q6101, v3.0", Minimum accepted score is 80%	Certified for Job Role: **“Trainer (VET and Skills)”**, mapped to Qualification Pack: **“MEP/Q2601, v3.0”**, Minimum accepted score as per MEPSC guidelines is 80%.

Assessor Requirements (Technician - Last Mile Active Network)

Assessor Pre-requisites						
Minimum Educational Qualification	**Specialisation**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialisation***	***Years***	***Specialisation***	
Diploma after 12th Class	Electronics and Communication / Telecom / Hardware & Networking / CS / IT	6	Field installation, configuration, and troubleshooting of last-mile active network components	4	Networking, telecom installation, or digital infrastructure	Eligible for ToT program
Graduation	Electronics and Communication / Telecom / Hardware & Networking / CS / IT	4	Field installation, configuration, and troubleshooting of last-mile active network components	4	Networking, telecom installation, or digital infrastructure	Eligible for ToT program

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "**Technician - Last Mile Active Network**", " TEL/Q6101, v3.0", Minimum accepted score is 80%	Certified for Job Role: **“Assessor (VET and Skills)”**, mapped to Qualification Pack: **“MEP/Q2701, v3.0”**, Minimum accepted score as per MEPSC guidelines is 80%.

Trainer Requirements (Employability Skills 60 hours)

Trainer Pre-requisites						
Minimum Educational Qualification	**Specialisation**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	**Specialisation**	**Years**	**Specialisation**	
Graduate/CITS	Any discipline			2	Teaching experience	Prospective ES trainer should: • have good communication skills • be well versed in English • have digital skills • have attention to detail • be adaptable • have willingness to learn
Current ITI trainers	Employability Skills Training (3 days full-time course done between 2019-2022)					
Certified current EEE trainers (155 hours)	from Management SSC (MEPSC)					
Certified Trainer	Qualification Pack: Trainer (MEP/Q0102)					

Assessor Certification	
Domain Certification	**Platform Certification**
Certified in 90-hour Employability NOS (2022), with a minimum score of 80% OR Certified in 120-hour Employability NOS (2022), with a minimum score of 80%	NA

Assessment Strategy

1. Assessment System Overview:
    - Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email.
    - Assessment agencies send the assessment confirmation to VTP/TC, looping SSC.
    - The assessment agency deploys the ToA certified assessor for executing the assessment.
    - SSC monitors the assessment process & records.
2. Testing Environment:
    - Confirm that the centre is available at the same address as mentioned on SDMS or SIP.
    - Check the duration of the training.
    - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
    - If the batch size is more than 30, then there should be 2 Assessors.
    - Check that the allotted time to the candidates to complete the Theory & Practical Assessment is correct.
    - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
    - Confirm the number of TABs on the ground are correct to execute the assessment smoothly.
    - Check the availability of the Lab Equipment for the particular Job Role.
3. Assessment Quality Assurance levels / Framework:
    - Question papers created by the Subject Matter Experts (SME).
    - Question papers created by the SME and verified by the other subject Matter Experts.
    - Questions are mapped with NOS and PC.
    - Question papers are prepared considering that level 1 to 3 are for the unskilled & semi- skilled individuals, and level 4 and above are for the skilled, supervisor & higher management.
    - An assessor must be ToA certified & the trainer must be ToT Certified.
    - The assessment agency must follow the assessment guidelines to conduct the assessment.
4. Types of evidence or evidence-gathering protocol:
    - Time-stamped & geotagged reporting of the assessor from the assessment location.
    - Center photographs with signboards and scheme-specific branding.
    - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period.
    - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos.
5. Method of verification or validation:
    - A surprise visit to the assessment location.
    - A random audit of the batch.
    - Random audit of any candidate.
6. Method for assessment documentation, archiving, and access:
    - Hard copies of the documents are stored.
    - Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage.

- Soft copies of the documents & photographs of the assessment are stored in the Hard Drives.

Assessment Strategy (Employability Skills 30 hours)

The trainee will be tested for the acquired skill, knowledge and attitude through formative/summative assessment at the end of the course and as this NOS and MC is adopted across sectors and qualifications, the respective AB can conduct the assessments as per their requirements.

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	A key learning outcome is a statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on-site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on-site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	The terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
NOS	National Occupational Standard (s)
NSQF	National Skills Qualifications Framework
OJT	On-the-job Training
QP	Qualifications Pack
PwD	People with Disability
PPE	Personal Protective Equipment
AI	Artificial Intelligence
ML	Machine Learning