Model Curriculum

QP Name: Smart Devices Installation Operator

QP Code: TEL/Q6102

QP Version: 3.0

NSQF Level: 4

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

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Training Parameters

Sector	Telecom
Sub-Sector	Network Managed Services
Occupation	Network (Active Components) Installation
Country	India
NSQF Level	4
Credits	13
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7421.6102
Minimum Educational Qualification & 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 3.0 with 3-year relevant experience** **Diploma in Electronics and Telecommunication, IT, CS, Data Science or AI/ML related fields* *** Relevant experience in installation, basic configuration, and testing of AI/ML-based edge devices or platforms.*
Minimum Level of Education for Training in School	12th Class
Pre-Requisite License or Training	Basic knowledge of Python and Data Structures
Minimum Job Entry Age	NA
Last Reviewed On	19-08-2025
Next Review Date	30-06-2028
NSQC Approval Date	19-08-2025

Version	3.0
Reference code on NQR	
NQR Version	3
Minimum Duration of the Course	390 hours
Maximum Duration of the Course	390 hours

Program Overview

This section summarizes 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.

- Identify the roles and responsibilities of an smart platforms installation operator in various business environments
- Demonstrate how to prepare tools, equipment, and infrastructure for the installation of smart platforms
- Apply standard procedures for installing AI Platforms in alignment with the proposed business model
- Illustrate how to perform predictive maintenance of smart devices
- Monitor and optimize the performance of installed AI Platforms through data analysis and system feedback
- Demonstrate effective communication and teamwork skills for smooth coordination during installation and maintenance activities
- Comply with the guidelines for ensuring electrical safety, cybersecurity, and physical safety at the workplace

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/N6615: Prepare for Installation of Smart Devices NOS Version No. 3.0 NSQF Level 4	**30:00**	**30:00**	**30:00**	**-**	**90:00**
Module 1: Role and Responsibilities of an Smart Devices Installation Operator	10:00	00:00	00:00	-	10:00
Module 2: Prepare for Installation of Smart Devices	20:00	30:00	30:00	-	80:00
TEL/N6616: Install Smart Devices as per Business Requirement NOS Version No. 3.0	**20:00**	**40:00**	**60:00**	**-**	**120:00**

NSQF Level 4					
Module 3: Installation of Smart Devices as per Business Requirement	20:00	40:00	60:00	-	120:00
TEL/N6612: Troubleshoot and Maintain Smart Devices NOS Version No. 3.0 NSQF Level 4	**20:00**	**30:00**	**40:00**	**-**	**90:00**
Module 4: Troubleshooting and Maintenance of Smart Devices	20:00	30:00	40:00	-	90:00
TEL/N9101: Organise Work and Resources as per Health and Safety Standards NOS Version No. 3.0 NSQF Level 4	**10:00**	**10:00**	**10:00**	**-**	**30:00**
Module 5: Organize Work and Resources as per Health and Safety Standards	10:00	10:00	10:00	-	30:00
TEL/N9102: Interact Effectively with Team Members and Customers NOS Version No. 3.0 NSQF Level 4	**10:00**	**10:00**	**10:00**	**-**	**30:00**
Module 6: Interact Effectively with Team Members and Customers	10:00	10:00	10:00	-	30:00
DGT/VSQ/N0101 - Employability Skills (30 hours) NOS Version No. – 1.0 NSQF Level – 4	**30:00**	**-**	**-**	**-**	**30:00**
Total Duration	**120:00**	**120:00**	**150:00**	**-**	**390:00**

Module Details

Module 1: Role and Responsibilities of an Smart Devices Installation Operator

TEL/N6615, v3.0

Terminal Outcomes:

- Describe the size and scope of the Telecom industry along with its various sub-sectors and their functions.
- Explain the key responsibilities and duties performed by a smart device Installation operators.

Duration: *10:00*	**Duration**: *0:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the size and reach of the telecom sector and its different subsectors. • Describe the duties and responsibilities of a Smart Devices Installation Operator. • Discuss about the company's policies on public relations (PR), quality standards, people management, workplace ethics, and site management. • Explain the organization's workflow and the part a Smart Device Installation Operator plays in it. • Enumerate the different daily, weekly, and monthly operations and activities that occur at the site.	
Classroom Aids:	
Participant handbook, Training Kit (Trainer Guide, Presentations), Laptop, white board, marker, projector, Notepad, Pen, Printed checklist templates, Basic presentation board	
Tools, Equipment and Other Requirements	
NA	

Module 2: Prepare for Installation of Smart Devices

Mapped to TEL/N6615 & v3.0

Terminal Outcomes:

- Assess customer requirements and site environment to determine the feasibility of smart device installation, including power, network protocols, and environmental constraints.
- Collect and analyze operational and historical performance data to validate device compatibility, identify anomalies, and determine appropriate communication standards and configurations.
- Demonstrate the process to map customer business goals and KPIs to smart device features and capabilities for effective automation and monitoring solutions.
- Show how to present smart device layout and integration plans to customers using diagrams or digital tools, ensuring clarity in deployment and data flow.
- Evaluate the suitability and performance of recommended smart device solutions through on-site testing, stakeholder feedback, and workflow impact assessment.

Duration: *20:00*	**Duration**: *30:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Interpret customer-provided technical specifications (e.g., device type, power, connectivity) and explain their relevance to smart device installation requirements. • Identify key environmental constraints (e.g., interference, temperature) and describe how they impact smart device performance. • Classify communication protocols (e.g., MQTT, Zigbee, Bluetooth Mesh) based on their use cases and compatibility with existing infrastructure. • Compare different smart device capabilities (e.g., voice command, motion detection) and justify their suitability for specific customer KPIs. • Explain standard features of smart devices using practical examples like facial recognition for access control or energy-saving automation. • Illustrate solution architectures with block diagrams showing connectivity,	• Conduct a site feasibility assessment by physically inspecting structural compatibility, power availability, and network protocols. • Collect real-time operational datasets, usage logs, and workflow information from the site to aid smart device configuration. • Validate collected data against benchmarks such as latency tolerance and bandwidth requirements to assess system readiness. • Identify hardware compatibility issues by examining existing routers, hubs, and sensors in the customer's ecosystem. • Demonstrate the proposed device layout to the customer using diagrams or mobile app interfaces and respond to their basic queries. • Document the final smart device solution, including hardware specifications, logical workflows, and integration diagrams.

integration points, and data workflows.	
Classroom Aids:	
Participant handbook, Training Kit (Trainer Guide, Presentations), Whiteboard, marker pen, computer or laptop attached to LCD projector, scanner, computer speakers	
Tools, Equipment and Other Requirements	
Measuring tape, Screwdriver set, Wire stripper, Insulation tape, Voltage detector, Safety gloves, Label maker, Laptop with open-source planning tools, Mobile/tablet with monitoring apps, Smartphone with communication apps, Notepad, Printed checklist templates, Basic presentation board, Cable tester, RJ45 crimping tool, Network cables, Wall plugs and screws	

Module 3: Installation of Smart Devices as per Business Requirement

Mapped to TEL/N6616 & v3.0

Terminal Outcomes:

- Inspect and validate smart device hardware and accessories against BoM and infrastructure compatibility before initiating installation.
- Identify and prepare appropriate installation zones based on coverage needs, environmental factors, and business requirements.
- Install, mount, and configure smart devices and components using correct tools, secure cabling practices, and verified power connections.
- Provision, update, and connect devices to cloud platforms using secure credentials and test configuration integrity through diagnostics.
- Verify and test the operational performance of installed devices including sensors, actuators, and wireless connectivity in real-time scenarios.
- Document and route the complete smart device installation using structured cabling, annotated layouts, and geotagged images for verification and compliance.

Duration: *20:00*	**Duration**: *40:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of verifying hardware components against the Bill of Materials (BoM) and integration specifications. • Describe key components of smart devices such as sensors, microcontrollers, embedded processors, and communication modules. • Differentiate between microcontroller platforms (e.g., Raspberry Pi, Arduino, ESP32) and evaluate their suitability for various deployment use cases. • Illustrate standard protocols and tools for device provisioning, firmware updates, and cloud connectivity. • Classify types of communication and power cabling (e.g., Cat6, PoE) and state best practices for secure installation. • Summarize procedures for environmental assessment and placement of smart devices based on functional requirements.	• Inspect hardware and accessories on-site against the BoM and validate model/firmware compatibility. • Identify optimal mounting locations by assessing lighting, field-of-view, and device range coverage. • Mount smart devices using hand/power tools and connect communication cables ensuring signal integrity and secure termination. • Establish power supply connections using adaptors or PoE, measure voltage and grounding using a multimeter. • Perform firmware updates and initiate provisioning through apps/web portals with correct configuration settings. • Run diagnostics and test smart features including gesture detection, voice control, actuator responsiveness, and sensor accuracy. • Install environmental accessories such as weatherproof covers or filters, based on deployment conditions. • Lay structured cabling and label installation paths, capturing geotagged photos for documentation.

	• Conduct a final walkthrough with stakeholders and verify alignment with the original design plan.
Classroom Aids:	
Participant handbook, Training Kit (Trainer Guide, Presentations), Whiteboard, marker pen, computer or laptop attached to LCD projector, scanner, computer speakers	
Tools, Equipment and Other Requirements	
Drill machine (basic), Wall plugs and screws, Screwdriver set, Cable ties, Plastic conduit, Mounting brackets, RJ45 crimping tool, Network cables, Power extension board, Wi-Fi router, Laptop with open-source planning tools, Mobile/tablet with monitoring apps, Basic CCTV installation kit, Portable UPS, Measuring tape, Safety gloves, Smartphone with communication apps, Label maker, Thermal scanner (low-cost handheld), Arduino or Raspberry Pi with sensors	

Module 4: Troubleshooting and Maintenance of Smart Devices

Mapped to TEL/N6612 & v3.0

Terminal Outcomes:

- Monitor and assess smart device health using telemetry, analytics, and diagnostics tools to detect and forecast potential failures.
- Isolate and troubleshoot faults in smart devices by using diagnostic interfaces, performing firmware resets, and calibrating sensors.
- Validate and optimize smart device performance by adjusting settings, testing communication protocols, and implementing self-learning algorithms.
- Document and report all maintenance activities, incidents, and configurations in line with compliance and audit requirements.
- Configure and manage virtual assistants and rule-based automation tools to enhance device control, system alerts, and workflow execution.

Duration: *20:00*	**Duration**: *30:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the significance of telemetry data, device analytics, and Mean Time between Failures (MTBF) for predictive maintenance. • Describe diagnostic tools and interfaces such as REST APIs, OEM dashboards, and mobile apps used for fault isolation. • Differentiate between communication protocols (Wi-Fi, Zigbee, BLE, LoRa) and assess their vulnerability to signal interference or transmission issues. • Identify common sensor types (motion, temperature, air quality) and discuss their calibration requirements and expected output norms. • Explain the role of firmware updates, driver compatibility, and configuration files in optimizing device performance. • Discuss techniques for reducing network congestion and improving data transmission efficiency in smart ecosystems. • Summarize standard procedures for incident documentation and asset metadata management using platforms	• Monitor device telemetry logs and track anomalies such as signal drops or latency spikes in real time. • Execute scheduled diagnostics using platforms like AWS IoT Core or Azure IoT Central. • Isolate faults using serial logs, multimeters, or logic analyzers and reinstall firmware or perform bootloader resets. • Calibrate smart sensors using OEM tools and test communication integrity using ping tests, jitter analysis, or packet monitoring. • Simulate device triggers (e.g., motion, voice commands) to validate automation workflows and response accuracy. • Adjust detection thresholds and update firmware to optimize performance and implement adaptive/self-learning configurations. • Train end-users on identifying device health indicators, performing diagnostics, and using virtual assistants. • Maintain structured service logs and

like Jira, CMMS, or Excel macros. • Interpret usage of AI interfaces and smart assistants in automation workflows and error detection.	incident records including timestamps, snapshots, and resolution summaries. • Configure alert systems and automation using platforms like IFTTT, Node-RED, Alexa, or Google Assistant. • Monitor user interaction logs for recurring command failures or system misconfigurations.
Classroom Aids:	
Participant handbook, Training Kit (Trainer Guide, Presentations), Whiteboard, Marker pen, Computer or Laptop attached to LCD projector, Scanner, Computer speakers	
Tools, Equipment and Other Requirements:	
Low-cost digital multimeter, Cable tester, Voltage detector, Wire stripper, Mobile/tablet with monitoring apps, Laptop with open-source planning tools, Smartphone with communication apps, Contact cleaner spray, Cleaning kit, Mobile app for device health check, Open-source network monitoring software (e.g., Wireshark, Nagios), Basic analytics software (open-source), Inexpensive IoT diagnostic tools, Performance log sheet, Power analyzer (basic), Headset with mic, Notepad, Thermal scanner (low-cost handheld), Vibration sensor kits (DIY), Arduino or Raspberry Pi with sensors	

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	
Participant handbook, Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, and 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).

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 dialogue and escalation when necessary.	• 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 where all voices are heard, and equal opportunity for input is maintained.
Classroom Aids	
Participant handbook, 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	• Show how to operate digital devices and use the associated applications and features, safely and	3 Hours

	Skills	securely • Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely	
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/Q6202, v3.0

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

Terminal Outcomes

- Demonstrate proper handling and basic assembly of smart device components such as sensors, power modules, data cables, and mounting fixtures.
- Follow standard operating procedures (SOPs) to perform pre-installation checks for tools, devices, network compatibility, and safety requirements.
- Install and configure smart platforms securely at designated locations while ensuring optimal positioning for data collection or surveillance.
- Apply basic troubleshooting techniques to identify and report hardware/software issues during or after installation (e.g., connection faults, calibration errors).
- Use mobile apps or digital tools to log installation status, device ID, firmware versions, and maintenance schedules.
- Conduct routine power supply inspections (including battery checks or UPS verification) and follow safe charging and storage procedures where applicable.
- Assist in functional testing and calibration of smart platforms under supervision to ensure operational readiness and data accuracy.
- Perform basic cleaning and maintenance of device exteriors, lenses, sensors, and casing to prevent dust-related performance issues.
- Track and update inventory of smart platform components, spare parts, and consumables using checklist formats or digital asset management tools.
- Communicate effectively with supervisors or technical leads about task progress, field challenges, and shift handovers.
- Adopt energy-efficient practices, such as switching off unused devices and tools, and handling all equipment as per prescribed guidelines.
- Dispose of damaged electronics, batteries, or packaging as per company policies and electronic waste (e-waste) disposal protocols.
- Demonstrate emotional intelligence and respectful behaviour when interacting with clients, site managers, and team members.
- Role-play professional client interaction scenarios, such as explaining installation progress or addressing basic queries during site visits.
- Document field issues, incidents, or delays in standard reporting templates and escalate critical issues to relevant departments promptly.

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Diploma after 12th Class	Computer Science/Electronics/Telecom/IT and AI/ML related domains	4	Active Networks/IoT Domain	0	NA	Eligible for ToT
Graduate	Science/Electronics/Telecom/IT and other relevant domains	1	Active Networks/IoT Domain	0	NA	Eligible for ToT

Trainer Certification	
Domain Certification	**Platform Certification**
"Smart Devices Installation Operator", "TEL/Q6102, 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

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Diploma after 12th Class	Science/Electronics/Telecom/IT and other related domains	7	Active Networks/IoT Domain	0	NA	Eligible for ToT
Graduate	Science/Electronics/Telecom/IT and other relevant domains	4	Active Networks/IoT Domain	0	NA	Eligible for ToT

Assessor Certification	
Domain Certification	**Platform Certification**
"Smart Devices Installation Operator", "TEL/Q6102, 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%.

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
    - 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 for STT and/ or 50 in RPL, then there should be 2 Assessors.
    - Check that the allotted time to the candidates to complete 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 SME verified by the other subject Matter Experts
    - Questions are mapped with NOS and PC
    - Question Bank covers all performance criteria (PC) under each NOS of a QP. Each question can cover one or more PCs. Which means that every question needs to be mapped with PC.
    - There are sufficient number of questions in the question bank, where multiple questions are available for each PC. Typically, the number of questions should be 3 to 4 times the number of PCs.
    - Each question bank has around 150 to 200 questions.
    - Each question has a difficulty level mentioned against it and the question bank has a good mix of easy, medium and difficult questions. So, for example out of 200 Questions the proportion could be 25 difficult/ hard, 75 Medium and 100 Easy level questions.
    - Other than the Multiple-choice question (MCQ) few questions are created for Practical and viva too. For e.g., for 150-200 QB contains approximately 10-15 Viva & 10-15 practical questions.
    - Assessor must be ToA certified & trainer must be ToT Certified
    - 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 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:
    - Surprise visit to the assessment location
    - 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

References

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.

Acronyms and Abbreviations

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
PC	Performance Criteria
SSC	Sector Skill Council
AA	Assessment Agency
ToT	Training of Trainers
ToA	Training of Assessors
VTP	Vocational Training Partner
TC	Training Center
SME	Subject Matter Expert