



# Model Curriculum

**QP Name: Technician 5G – Active Network Installation**

**QP Code: TEL/Q6213**

**Version: 1.0**

**NSQF Level: 4**

**Model Curriculum Version: 1.0**

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# Training Parameters

<b>Sector</b>	Telecom
<b>Sub-Sector</b>	Network Managed Services
<b>Occupation</b>	Network (Active Components) Installation
<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/NA
<b>Minimum Educational Qualification and Experience</b>	<p>Class 12th  <b>OR</b>            Class 10th + ITI (2 years in Electronics/Telecom /IT and other relevant fields)  <b>OR</b>            Class 10th with 2 years of relevant experience  <b>OR</b>            Class 8th + ITI (2 years in Electronics/Telecom /IT and other relevant fields) with 2 years of relevant experience  <b>OR</b>            Diploma after Class 10th (3 years in Electronics/Telecom /IT and other relevant fields)  <b>OR</b>            Certified in NSQF-L3 Last Mile - Active Network Comp Installer with 2 Years of relevant experience</p>
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	17 Years
<b>Last Reviewed On</b>	31/03/2022
<b>Next Review Date</b>	31/03/2026
<b>NSQC Approval Date</b>	31/03/2022
<b>QP Version</b>	1.0
<b>Model Curriculum Creation Date</b>	31/03/2022
<b>Model Curriculum Valid Up to Date</b>	31/03/2026
<b>Model Curriculum Version</b>	1.0
<b>Minimum Duration of the Course</b>	510 Hours
<b>Maximum Duration of the Course</b>	510 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 to:

- Demonstrate the process of installing the relevant 5G network infrastructure.
- Demonstrate the process of maintaining the 5G network infrastructure.
- Describe the process of following the occupational health and safety instructions during tower climbing.
- Explain the importance of implementing effective communication and coordination at work.
- Explain the importance of managing work and resources, and ensuring health and safety at work.

### 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
<b>Bridge Module</b>	<b>08:00</b>	<b>04:00</b>	<b>12:00</b>	-	<b>24:00</b>
Module 1: Introduction to the role of a 5G Technician – Active Network Installation	08:00	04:00	12:00	-	24:00
<b>TEL/N6104: Carry out rack-level installation NOS Version-1.0 NSQF Level- 4</b>	<b>56:00</b>	<b>64:00</b>	<b>36:00</b>	-	<b>156:00</b>
Module 2: Process of carrying out rack-level installation	56:00	64:00	36:00	-	156:00
<b>TEL/N6105: Carry out 5G active network installation Version-1.0 NSQF Level- 4</b>	<b>68:00</b>	<b>74:00</b>	<b>52:00</b>	-	<b>194:00</b>
Module 3: Process of carrying out 5G active network installation	68:00	74:00	52:00	-	194:00
<b>TEL/N6246: Follow the occupational health and</b>	<b>16:00</b>	<b>20:00</b>	<b>20:00</b>	-	<b>56:00</b>

<b>safety instructions during tower climbing</b>					
Module 4: Process of following the occupational health and safety instructions during tower climbing	16:00	20:00	20:00	-	56:00
<b>TEL/N9101: Organise Work and Resources as per Health and Safety Standards</b> <b>NOS Version-1.0</b> <b>NSQF Level-5</b>	<b>16:00</b>	<b>24:00</b>	<b>00:00</b>	-	<b>40:00</b>
Module 5: Process of organising work and resources as per health and Safety standards	16:00	24:00	00:00	-	40:00
<b>TEL/N9102: Interact Effectively with Team Members and Customers</b> <b>NOS Version-1.0</b> <b>NSQF Level-5</b>	<b>16:00</b>	<b>24:00</b>	<b>00:00</b>	-	<b>40:00</b>
Module 6: Process of interacting effectively with team members and customers	16:00	24:00	00:00	-	40:00
<b>Total Duration</b>	<b>180:00</b>	<b>210:00</b>	<b>120:00</b>	-	<b>510:00</b>

# Module Details

## Module 1: Introduction to the role of a 5G Technician – Active Network Installation

### Bridge Module

#### Terminal Outcomes:

- Discuss the job role of a 5G Technician – Active Network Installation.
- Explain the scope of work for a 5G Technician – Active Network Installation.

<b>Duration: 08:00</b>	<b>Duration: 04:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Describe the size and scope of the Telecom industry and its sub-sectors.</li> <li>• Discuss the role and responsibilities of a 5G Technician – Active Network Installation.</li> <li>• Identify various employment opportunities for a 5G Technician – Active Network Installation.</li> <li>• Discuss the organisational policies on workplace ethics, managing sites, quality standards, personnel management and public relations (PR).</li> <li>• Describe the process workflow in the organization and the role of a 5G Technician – Active Network Installation in the process.</li> <li>• List the various daily, weekly, monthly operations/activities that take place at the site under a 5G Technician – Active Network Installation.</li> </ul>	<ul style="list-style-type: none"> <li>• Role play based on case studies, outlining the scope, responsibilities, and challenges of a 5G Technician – Active Network Installation.</li> <li>• Analyse the requirements for the course and prepare for the pre-requisites of the course.</li> </ul>
<b>Classroom Aids</b>	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
<b>Tools, Equipment and Other Requirements</b>	
NA	



## Module 2: Process of carrying out rack-level installation

### Mapped to TEL/N6104, v1.0

#### Terminal Outcomes:

- Describe the process of preparing for the installation.
- Demonstrate the process of carrying out the installation.

Duration: 56:00	Duration: 64:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• List different types of racks used for the installation of different types of IT equipment.</li> <li>• State the standard dimensions of racks, i.e., height, width, depth, and load rating.</li> <li>• State the standard dimensions of different types of IT equipment, such as servers, storage equipment, network switches, routers, telecommunications hardware, etc.</li> <li>• Explain different components of racks, such as doors, roof panels, side panels, locks, hinged wall brackets, casters, levellers, etc.</li> <li>• State the criteria for selecting a room/ space for the installation of racks to house 5G network equipment.</li> <li>• List different types of racks used for the installation of 5G network equipment.</li> <li>• State the criteria for selecting appropriate types of racks for the safe placement of various 5G network equipment.</li> <li>• Explain the importance and process of ensuring the availability of correct voltages and sufficient amperage for all the 5G network equipment.</li> <li>• Explain the importance of ensuring that there are no sources of heat in and around the room selected for the installation of racks and equipment.</li> <li>• Explain the importance of ensuring adequate active or passive ventilation</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare a sample plan for the placement of the racks in relation to the room and important resources, such as power circuits and cooling equipment.</li> <li>• Demonstrate the process of setting up gNodeB and other 5G network equipment on racks safely and securing them using nuts and screws, adhering to the load rating of racks.</li> <li>• Demonstrate the process of carrying out the installation of blade servers and other high-density and high-wattage loads in multiple racks to prevent problematic hot spots.</li> <li>• Demonstrate the process of carrying out troubleshooting for any faults/ malfunctions identified in the equipment, as per the manufacturer's instructions.</li> <li>• Demonstrate the process of configuring the operating system with the VM ware.</li> </ul>

<p>for the dissipation of heat generated by the equipment.</p> <ul style="list-style-type: none"> <li>• Describe the process of planning the placement of racks in relation to the room and important resources, such as power circuits and cooling equipment.</li> <li>• Describe the process of arranging racks in a hot-aisle/cold-aisle layout to reduce energy use.</li> <li>• Describe the process of planning the installation of equipment on racks.</li> <li>• Describe the process of checking gNodeB damages and faults.</li> <li>• Explain the importance of ensuring to place the heavy equipment at the bottom of racks to prevent them from becoming top-heavy and prone to tipping over.</li> <li>• Explain the importance of installing blade servers and other high-density and high-wattage loads in multiple racks to prevent problematic hot spots.</li> <li>• List the common faults/malfunctions experienced with the 5G network equipment.</li> <li>• Explain networking fundamentals, such as Transmission Control Protocol (TCP)/ Internet Protocol (IP), Domain Name System (DNS), Secure Shell (SSH), Secure Sockets Layer (SSL), Hypertext Transfer Protocol (HTTP)</li> </ul>	
<b>Classroom Aids</b>	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
<b>Tools, Equipment and Other Requirements</b>	
Fiber Cable Port, POE Switch, Optical Fiber Cable, Transceiver, Patch Panel	



## Module 3: Process of carrying out 5G active network installation

*Mapped to TEL/N6105, v1.0*

### Terminal Outcomes:

- Demonstrate the process of carrying out a power, earthing and RF cabling.
- Demonstrate the process of installation and commissioning backhaul connectivity.

<b>Duration: 68:00</b>	<b>Duration: 74:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the importance of the 3rd Generation Partnership Project (3GPP) and their releases relevant to the 5G network.</li> <li>• Explain the constituent modules of 5G gNodeB and their functions.</li> <li>• Describe the process of determining the power requirements of the gNodeB and other equipment.</li> <li>• Explain the use of different types of power, earthing and RF cables.</li> <li>• Explain the importance of ensuring appropriate routing and termination of cables between omnidirectional and directional or sector antennas to allow their easy maintenance.</li> <li>• Explain the importance of making the gNodeB visible in the central unit so that commissioning commands can be given from the central unit.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the process of installing power cables between the equipment and power source to ensure power supply to the equipment.</li> <li>• Demonstrate the process of installing earthing cables to the earth source.</li> <li>• Demonstrate the process of carrying out the installation of RF cables between gNodeB/ other equipment and the antennas on the cell tower.</li> <li>• Show how to check for transmission between the equipment and the antennas and carry out appropriate troubleshooting, as required.</li> <li>• Demonstrate the process of establishing high throughput ethernet/ fiber based backhaul connectivity on the Ethernet interface.</li> <li>• Show how to use fiber optic for backhaul connectivity for the 5G network.</li> <li>• Demonstrate how to terminate the backhaul connectivity to ensure gNodeB is configurable and connected to the central office.</li> <li>• Show how to create a Centralised Unit–Distributed Unit (CU-DU) split base station.</li> <li>• Show how to configure gNodeB to the Centralised Unit (CU).</li> <li>• Demonstrate the process of installing the appropriate environmental alarm systems and configuring them to the central unit so that the site can be</li> </ul>

	<p>monitored in the network operation centre.</p> <ul style="list-style-type: none"> <li>• Demonstrate the process of installing the appropriate Operating System (OS) and the Virtual Machine (VM) ware.</li> </ul>
<p><b>Classroom Aids</b></p>	
<p>Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<p>Earthing Cable, Signal Analysis Software, 5G Multiband Transceiver, Centralised Unit–Distributed Unit (CU-DU), RF Cable, Fibre Optic Cable, RF Connectors, 5G Radio Unit.</p>	

## Module 4: Process of following the occupational health and safety instructions during tower climbing

*Mapped to TEL/N6246, v1.0*

### Terminal Outcomes:

- Describe the process of performing the pre-climb tower inspection.
- Describe the process of checking the safety equipment and work site conditions.
- Demonstrate the process of carrying out tower operations following safety instructions.

<b>Duration: 16:00</b>	<b>Duration: 20:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the importance of getting adequate training and practice in tower climbing to minimise the injuries and untoward incidents during tower climbing.</li> <li>• Explain the importance of ensuring the availability of well-maintained safety equipment before climbing towers.</li> <li>• List various PPE required for tower climbing.</li> <li>• Explain the importance of ensuring the availability of a fully-equipped first aid kit at the work site.</li> <li>• Explain the benefit and importance of using two-way radio for telecom riggers to maintain communication with ground crew.</li> <li>• Explain the importance of identifying unsafe conditions at the work site and reporting them promptly to the appropriate authority following the applicable reporting process.</li> <li>• Explain the importance of checking the availability of relevant PPE and not undertaking any rigging work without PPE.</li> <li>• Explain the importance and process of checking the PPE to ensure it is functioning properly and safe to use.</li> <li>• Explain the importance of conducting comprehensive safety planning, including a Job Hazard Analysis (JHA) and an Emergency Action Plan (EAP)</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate how to use binoculars to check for loose or missing hardware.</li> <li>• Show how to use a full-body harness tied off at appropriate spots on the tower to maintain complete tie-off while on the tower.</li> <li>• Demonstrate the use of a safety cable climb or two or more lanyards.</li> <li>• Demonstrate the use of the appropriate PPE while climbing up and down and working on towers.</li> <li>• Demonstrate the process of administering first aid for different types of medical emergencies.</li> </ul>

<p>for every job site.</p> <ul style="list-style-type: none"> <li>• Explain the importance and process of checking weather conditions and avoiding any work at heights during adverse weather conditions.</li> <li>• Explain the importance of not working at heights in case of impaired physical health, such as being under medication that may cause drowsiness affecting the ability to work with concentration at elevations.</li> <li>• Explain the importance of continually enhancing safety skills and awareness through regular training.</li> <li>• Describe the process of conducting inspections of tools, hoisting and rigging equipment, and other machinery.</li> <li>• Explain the applicable electrical health and safety standards.</li> <li>• State the appropriate climbing and working practices to be adopted for a range of telecom structures, such as towers, poles and other steel structures.</li> <li>• Explain the applicable health and safety standards and regulations.</li> <li>• Explain the importance and process of preparing and reviewing incident reports for tower climbing incidents to avoid any similar incidents in future.</li> </ul>	
<b>Classroom Aids</b>	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
<b>Tools, Equipment and Other Requirements</b>	
PPE Kit, Safety Kit, Carabiners Connectors, Harnesses, RF Safety, Two Way Radios, Tower Climbing Kits, Helmet, RF Monitor.	

## Module 5: Process of organising work and resources as per health and Safety standards

*Mapped to NOS TEL/N9101 v1.0*

### Terminal Outcomes:

- Explain the importance of performing work as per quality standards.
- Explain the importance of maintaining a safe, healthy and secure working environment.
- Explain the importance of conserving material/energy/electricity.
- Describe the process of using effective waste management/recycling practices.

<b>Duration: 16:00</b>	<b>Duration: 24:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain various 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 advancement in their skills.</li> <li>• State key performance indicators for the new tasks.</li> <li>• Describe feedback processes and formats.</li> <li>• Explain timelines and goals as well as their relevance to work allocated.</li> <li>• Explain the importance of quality and timely delivery of the product/service.</li> <li>• Explain the escalation matrix and its importance, especially in case of emergencies.</li> <li>• Explain various ways of time and cost management.</li> <li>• State the rules/regulations for maintaining health and safety at the workplace.</li> <li>• Explain the meaning of hazard, different types of health and safety hazards found in the workplace, risks and threats based on the nature of work.</li> <li>• Explain the relevant signage, warnings, labels or descriptions on equipment, etc. while carrying out</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate how to record/document tasks completed as per the requirements within specific timelines.</li> <li>• Show how to analyse problems accurately and communicate different possible solutions to the problem.</li> <li>• Demonstrate how to report any identified breaches in health, safety, and security policies and procedures to the designated person.</li> <li>• Demonstrate the process of using safety materials such as goggles, gloves, earplugs, caps, ESD pins, covers, shoes, etc.</li> <li>• Demonstrate the process of handling heavy and hazardous materials with care, while maintaining appropriate posture.</li> <li>• Demonstrate the process of carrying out routine cleaning of tools, machines and equipment.</li> <li>• Demonstrate ways to optimise the use of electricity/energy in various tasks/activities/processes.</li> <li>• Demonstrate the process of performing periodic checks of the functioning of the equipment/machine and rectify wherever required.</li> </ul>

<p>work activities.</p> <ul style="list-style-type: none"> <li>• Describe the procedures to report breaches in health, safety and security.</li> <li>• Describe the organisation's procedures for different emergency situations and the importance of following the same.</li> <li>• Describe different methods of cleaning, disinfection, sterilisation, and sanitisation.</li> <li>• Explain the significance of personal hygiene practice including hand hygiene.</li> <li>• Explain the path of disease transmission.</li> <li>• Describe the correct method of donning and doffing of PPE.</li> <li>• Explain different ways of managing resources and material efficiently.</li> <li>• Explain common electrical problems and common practices of conserving electricity.</li> <li>• Explain categorisation of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics and use of different colours of dustbins.</li> <li>• Describe the organisation's procedures for minimising waste.</li> <li>• Explain waste management and methods of waste disposal.</li> <li>• State common sources of pollution and ways to minimise it.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate ways to use electrical equipment and appliances properly</li> <li>• Demonstrate the process of disposing non-recyclable and hazardous waste as per recommended processes.</li> </ul>
<b>Classroom Aids:</b>	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
<b>Tools, Equipment and Other Requirements</b>	
Relevant Stationery, First Aid Kit and Equipment used in Medical Emergencies.	



## Module 6: Process of interacting effectively with team members and customers

*Mapped to TEL/N9102 v1.0*

### Terminal Outcomes:

- Explain the importance of interacting effectively with superiors, colleagues and customers.
- Explain the need of respecting differences of gender and ability.

<b>Duration: 16:00</b>	<b>Duration: 24:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the organisation's policies on dress code, workplace timings, workplace behaviour, performance management, incentives, delivery standards, information security, etc.</li> <li>• Explain the organisation's hierarchy and escalation matrix</li> <li>• Explain the importance of establishing good working relationships with colleagues and superiors.</li> <li>• Explain the importance of helping colleagues with problems, in order to meet quality and time standards as a team.</li> <li>• Describe different means and methods of communication.</li> <li>• State different types of information that colleagues might need and the importance of providing this information in an appropriate manner.</li> <li>• Describe the organization's policies and procedures for working with colleagues and superiors.</li> <li>• Explain the importance of understanding the consequences of gender based behaviour.</li> <li>• Describe gender based concepts, issues and legislation</li> <li>• State the organization 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</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate ways to communicate professionally using different techniques such as face-to-face, telephonic and written means.</li> <li>• Demonstrate appropriate verbal and non-verbal communication while interacting with People with Disability (PwD).</li> </ul>

<p>use them including various medical conditions associated with PwD</p> <ul style="list-style-type: none"> <li>• Explain the health and safety requirements at a workplace for PwD.</li> <li>• Describe the process of recruiting people for a particular job profile w.r.t PwD and gender.</li> <li>• Explain 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.</li> </ul>	
<p><b>Classroom Aids</b></p>	
<p>Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<p>Personal Protective Equipment, Hygiene Equipment and Materials like Sanitizer, Soap, Mask, etc.</p>	

## Module 7: On-the-Job Training

### Mapped to Technician 5G – Active Network Installation

<b>Mandatory Duration: 120:00</b>	<b>Recommended Duration: 00:00</b>
<b>Location: On-Site</b>	
<p><b>Terminal Outcomes</b></p> <ol style="list-style-type: none"> <li>1. Explain the criteria for selecting a room/ space for the installation of racks to house 5G network equipment.</li> <li>2. Set up gNodeB and other 5G network equipment on racks safely and secure them using nuts and screws, adhering to the load rating of racks.</li> <li>3. Carry out the installation of blade servers and other high-density and high-wattage loads in multiple racks to prevent problematic hot spots.</li> <li>4. Configure the operating system with the VM ware.</li> <li>5. Install power cables between the equipment and power source to ensure power supply to the equipment.</li> <li>6. Install earthing cables to the earth source.</li> <li>7. Carry out the installation of RF cables between gNodeB/ other equipment and the antennas on the cell tower.</li> <li>8. Establish high throughput ethernet/ fiber based backhaul connectivity on the Ethernet interface.</li> <li>9. Terminate the backhaul connectivity to ensure gNodeB is configurable and connected to the central office.</li> <li>10. Create a Centralised Unit–Distributed Unit (CU-DU) split base station.</li> <li>11. Install the appropriate Operating System (OS) and the Virtual Machine (VM) ware.</li> <li>12. Report any unforeseen disruptions or delays to superiors and/or concerned persons.</li> <li>13. Create schedules and rosters for the team to ensure they understand individual work requirements.</li> <li>14. Report any hazard outside the individual's authority to the relevant person in line with organizational procedures.</li> <li>15. Carry out routine cleaning of tools, machines and equipment.</li> </ol>	

# Annexure

## Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
B.E./B.Tech	Electronics/Telecom/IT and other relevant fields	1	Telecom Infrastructure - 5G Networks	0	NA	Eligible for ToT Program

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role “ <b>Technician 5G – Active Network Installation</b> ” mapped to QP: “TEL/Q6213, v1.0”, Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q2601, v1.0”. The minimum accepted score as per MEPSC guidelines is 80%.

## Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
B.E./B.Tech	Electronics/Telecom/IT and other relevant fields	1	Telecom Infrastructure - 5G Networks	0	NA	Eligible for ToT Program

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role “ <b>Technician 5G – Active Network Installation</b> ”, mapped to QP: “TEL/Q6213, v1.0”, Minimum accepted score is 80%	Certified for the Job Role: “ <b>Assessor</b> ”, mapped to the Qualification Pack: “ <b>MEP/Q2701, v1.0</b> ”, with a minimum score of 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, 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 Subject Matter Experts (SME).
- Question papers created by the SME 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.
- 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

Term	Description
<b>Declarative Knowledge</b>	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.
<b>Key Learning Outcome</b>	The key learning outcome is the 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).
<b>OJT (M)</b>	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on-site
<b>OJT (R)</b>	On-the-job training (Recommended); trainees are recommended the specified hours of training on-site
<b>Procedural Knowledge</b>	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.
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
<b>Terminal Outcome</b>	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