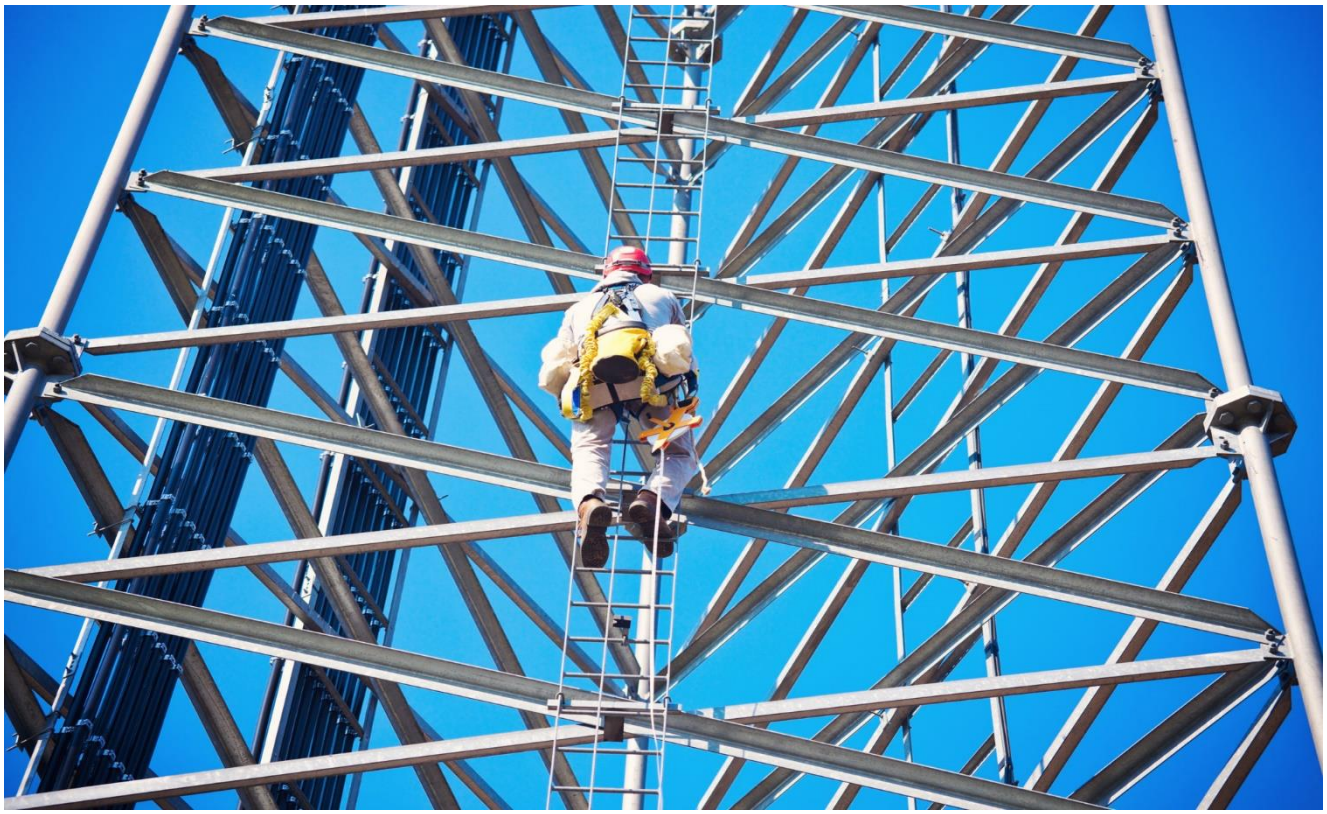

Model Curriculum

QP Name: Telecom Rigger – 5G and Legacy Networks

QP Code: TEL/Q6212

Version: 1.0

NSQF Level: 3

Model Curriculum Version: 1.0

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

Table of Contents

Training Parameters

Sector	Telecom
Sub-Sector	Passive Infrastructure
Occupation	Operations and Maintenance - Passive Infrastructure
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2015/NA
Minimum Educational Qualification and Experience	Class 10th **OR** Class 8th + ITI (2 years in Electronics/Telecom/IT and other relevant fields) **OR** Class 8th with 2 years of relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	15 Years
Last Reviewed On	31/03/2022
Next Review Date	31/03/2026
NSQC Approval Date	31/03/2022
QP Version	1.0
Model Curriculum Creation Date	31/03/2022
Model Curriculum Valid Up to Date	31/03/2026
Model Curriculum Version	1.0
Minimum Duration of the Course	420 Hours
Maximum Duration of the Course	420 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 telecom equipment.
- Demonstrate the process of maintaining, upgrading and decommissioning of telecom equipment and sites.
- 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
Bridge Module	**08:00**	**04:00**	**12:00**	**-**	**24:00**
Module 1: Introduction to the role of a Telecom Rigger – 5G Legacy Networks	08:00	04:00	12:00	-	24:00
TEL/N6310: Assist in the installation of telecom equipment **NOS Version-1.0** **NSQF Level- 3**	**36:00**	**56:00**	**48:00**	**-**	**140:00**
Module 2: Process of assisting in the installation of telecom equipment	36:00	56:00	48:00	-	140:00
TEL/N6323: Assist in the maintenance, upgrade and decommissioning of telecom equipment and sites **Version-1.0** **NSQF Level- 3**	**28:00**	**52:00**	**40:00**	**-**	**120:00**
Module 3: Process of assisting in the maintenance,	28:00	52:00	40:00	-	120:00

upgradation and decommissioning of telecom equipment and sites					
TEL/N6246: Follow the occupational health and safety instructions during tower climbing **Version-1.0** **NSQF Level- 4**	**16:00**	**20:00**	**20:00**	**-**	**56:00**
Module 4: Process of following the occupational health and safety instructions during tower climbing	16:00	20:00	20:00	-	56:00
TEL/N9101: Organise Work and Resources as per Health and Safety Standards **NOS Version-1.0** **NSQF Level-4**	**16:00**	**24:00**	**00:00**	**-**	**40:00**
Module 5: Process of organising work and resources as per health and Safety standards	16:00	24:00	00:00	-	40:00
TEL/N9102: Interact Effectively with Team Members and Customers **NOS Version-1.0** **NSQF Level-4**	**16:00**	**24:00**	**00:00**	**-**	**40:00**
Module 6: Process of interacting effectively with team members and customers	16:00	24:00	00:00	-	40:00
Total Duration	**120:00**	**180:00**	**120:00**	**-**	**420:00**

Module Details

Module 1: Introduction to the role of a Telecom Rigger – 5G and Legacy Networks

Bridge Module

Terminal Outcomes:

- Discuss the job role of a Telecom Rigger – 5G and Legacy Networks.
- Explain the scope of work for a Telecom Rigger – 5G and Legacy Networks.

Duration: 08:00	**Duration: 04:00**
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 Telecom Rigger – 5G Legacy Networks. • Identify various employment opportunities for a Telecom Rigger – 5G Legacy Networks. • 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 a Telecom Rigger – 5G Legacy Networks in the process. • List the various daily, weekly, monthly operations/activities that take place at the site under a Telecom Rigger – 5G Legacy Networks.	• Role play based on case studies, outlining the scope, responsibilities, and challenges of a Cloud Computing – Test Analyst. • Analyse the requirements for the course and prepare for the pre-requisites of the course.
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 2: Process of assisting in the installation of telecom equipment

Mapped to TEL/N6310, v1.0

Terminal Outcomes:

- Explain the process of determining the scope of work.
- Explain the process of preparing for the installation of telecom equipment.
- Explain the process of assisting in the installation of tower equipment and performing LOS check.
- Explain the process of assisting in the shelter room installations.
- Explain the process of assisting in completing documentation.

Duration: 36:00	Duration: 56:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the scope of installation work by co-ordinating with the supervisor and commissioning engineers. • Explain the importance of assisting the supervisor/ field manager by providing appropriate inputs and feedback as required to help achieve the scope of work. • Explain the importance of checking the installation material, tools and equipment, and PPE to ensure they are not faulty/damaged, and co-ordinate with the supervisor to get them replaced. • Explain the importance of adhering to the applicable safety guidelines during rigging operations. • Explain the importance and process of working safely at high elevations, and the use of appropriate safety equipment. • Explain different support mechanisms and techniques used to climb and work on different types of towers, such as guyed towers, lattice towers, monopole towers, stealth towers, etc. • Explain the common defects found in various telecom equipment • Explain the importance of identifying and documenting Job Hazard Assessment (JHA) requirements. • Explain the benefits of following	• Demonstrate how to analyse the relevant blueprints, schematics and as-built site plan to determine the work requirements. • Demonstrate the process of preparing Radio Frequency (RF) connector and jumper and assembling the relevant telecom equipment for installation. • Demonstrate the process of carrying out antenna assembly, waveguide, and coax connector assembly and crimping as per the supervisor's instructions. • Demonstrate the process of erecting and securing telecom structures, such as steel towers, monopoles, masts and cable tray installations to facilitate the installation of telecom equipment. • Demonstrate the process of installing antennas, feeders, microwave dishes, mast head amplifiers and ancillary equipment on steel structures/ monopoles/ towers, using the appropriate safety equipment to ensure safety at heights. • Demonstrate the process of carrying out the installation of all necessary transmission equipment components including antenna mounts, surge arrestors, eNodeB, gNodeB, transmission lines, connectors or Tower Mounted Amplifiers (TMAs),

checklists and Standard Operating Procedures (SOPs), such as efficiency and consistency in work.

- Explain the importance of determining the client requirements by studying blueprints and carrying out work accordingly.
- Describe the process of expanding and upgrading a cellular carrier network, involving civil work at existing cellular network sites and change of telecom equipment.
- Explain the importance and process of carrying out pre- and post-work site audits.
- Explain the benefits and process of upgrading legacy cable plants from coaxial cable to fibre.
- Explain the importance and process of determining the scope of work and client's requirements.
- List the relevant installation material, tools and equipment, and PPE required for telecom rigging.
- Describe the process of undertaking installation rectification for all equipment deployed during the project rollout.
- Describe the process of installing and testing copper and hybrid feeder system.
- Describe the process of microwave transmission installation and link budgeting and panning.
- Explain the use of a cable and antenna analyzer for VHF, broadcasting, cellular, PCS/GSM, 3G/4G/5G, ISM, WLAN and WLL applications.
- Explain the importance and process of measuring the alignment, azimuth, tilt, roll, and height of antennas using the antenna alignment tool.
- State the recommended safety practices to be followed while working at heights on a range of

Call Distribution Unit (CDU).

- Demonstrate the process of carrying out the installation of feeder cables, coax cables, and high jumpers on steel lattice towers, guyed towers, masts, rooftop and building antennas/ aerial systems.
- Demonstrate the process of installing Radio Frequency (RF) antenna system and external RF hardware, such as Remote Radio Units (RRUs), Tower Mounted Amplifier (TMAs), Combiners, microwave dishes, etc.
- Demonstrate the process of installing microwave antennas, such as parabolic antennas, Very High Frequency (VHF), Ultra High Frequency (UHF) antennas.
- Show how to install, connect or test underground or above ground grounding systems as per the supervisor's instructions.
- Show how to use coaxial connectors and coaxial preparatory tools appropriately as per the manufacturer's instructions.
- Show how to measure the alignment in azimuth, tilt, roll, and height of antennas using the antenna alignment tool and change the settings as per the instructions given by the RF engineer.
- Demonstrate the process of carrying out bird-proofing and water-proofing of connectors.
- Demonstrate the process of installing, terminating, earthing, labelling, and testing different types of cables, such as coaxial, Ethernet, feeder and optical fibre cables for the wireless telecom system.
- Demonstrate the process of installing and testing Outdoor Unit (ODUs), splitters, and Customer Premises Equipment (CPE) as per the supervisor's instructions.
- Demonstrate the process of installing

telecom structures, including poles, towers and masts.	mobile/broadcast antenna systems, panel antennas, head frames, hybriflex cables, feeder cables, earthing, cable trays, Remote Radio Units (RRUs), etc. • Show how to use the compass, Global Positioning System (GPS) receiver, Range Finder and other relevant equipment as per the requirement. • Demonstrate the process of carrying out labelling, grounding, PIM and sweep testing • Demonstrate the process of carrying out Passive Intermodulation (PIM) and sweep testing, following the supervisor's instructions. • Demonstrate the process of performing a Line of Sight (LOS) check to ensure signal drop or termination is not experienced. • Demonstrate how to identifying the reason for drop/ attenuation/ loss of signal, such as bad cable connection, incorrect network configuration, faulty network device, etc. • Show how to remove the sources causing obstructions, such as networks and radio noise from other electronic and mechanical equipment around wireless gateways. • Demonstrate the process of performing the shelter room installations as per the supervisor's instructions. • Demonstrate the process of carrying out cabling and relevant tests on the shelter room equipment to ensure their correct functioning. • Demonstrate the process of carrying out troubleshooting for any malfunctioning equipment, as required. • Prepare sample survey reports and documentation for client handover.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	

Tools, Equipment and Other Requirements
Radio Frequency (RF) Connector, Tower Mounted Amplifiers, Remote Radio Unit, Coaxial Cable, Coaxial Connector, Hand and Power Tools like - Cable Cutters, Crimping Pliers, Wire & Cable Strippers, Screwdrivers, Scissors & Knives, Modular & Coaxial Test Equipment, Laser Measuring & Impact Tools.

Module 3: Process of assisting in the maintenance, upgradation and decommissioning of telecom equipment and sites

Mapped to TEL/N6323 v1.0

Terminal Outcomes:

- Describe the process of carrying out preventive maintenance, corrective maintenance and upgradation.
- Describe the process of assisting in decommissioning of telecom site and equipment.

Duration: 28:00	Duration: 52:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of conducting site audits and auditing of rigging installation and civil areas. • Explain how to identify misalignment of telecom equipment and correct the alignment, wherever required. • Explain the importance and process of checking the maintenance requirement of telecom structures, lifting and personal safety equipment. • Explain the use of tower ladders, boom lift, cross lift, other safety mechanisms and practices to climb cell towers and structures. • State the common maintenance needs of antennas, microwave dishes, feeder cables and ancillary equipment on telecom towers, poles and masts. • Describe the process of estimating Distance to Fault (DTF) measurements for failure analysis concerning service and maintenance of antenna and transmission lines. • Describe the process of carrying out regular maintenance of telecom equipment and structures and list the relevant tools and equipment to be used for the purpose. • Describe the process of maintaining and upgrading telecom structures, such as steel towers, poles, masts and cable tray installations. • Describe the process of upgrading	• Demonstrate the process of carrying out preventive maintenance of telecom structures for corrosion, wind-induced vibration, and mechanical damages. • Demonstrate how to use the appropriate hand and power tools for performing maintenance or repair work on tower equipment and structures. • Show how to replace the faulty equipment and protective casing, as required. • Show how to use tower ladders and other safety mechanisms and practices to climb cell towers and structures to examine the telecom equipment and installations. • Demonstrate the process of carrying out appropriate troubleshooting for mechanical or electrical connections • Show how to test the antenna systems to find and rectify faults. • Demonstrate the process of carrying out cable repairs including splicing and termination crimping of coaxial connectors, replacement of cables. • Show how to check antenna positioning to ensure specified azimuths or mechanical tilts and adjust, as necessary. • Demonstrate how to use multimeter to measure the electrical parameters, earthing values and other parameters and interpret the readings by

wireless telecom sites and equipment. • List the relevant repair and maintenance data to be collected for maintaining the maintenance records. • Describe the process of checking and maintaining telecom equipment following the applicable safety, efficiency and calibration procedures. • Explain the importance of checking the maintenance requirement of telecom structures, lifting and personal safety equipment. • Describe the process of assisting in the upgrade of telecom structures, such as steel towers, poles, masts and cable tray installations and telecom equipment, following the supervisor's instructions.	comparing them with the standard values. • Show how to check the earth/ground connections, measure earth resistance, continuity of the down conductor, etc. • Demonstrate the process of carrying out cable repairs including splicing and termination crimping of coaxial connectors, replacement of cables. • Prepare the sample relevant records as per the organisational policy. • Demonstrate the process of swapping and decommissioning of mobile telecom sites and structures as per the requirement. • Demonstrate the process of recovering the 3G/ 4G/ 5G network equipment. • Demonstrate the process of decommissioning and dismantling telecom cabling and equipment as per the requirement. • Demonstrate the process of recovering panel antennas, head frames, hybriflex cables, feeder cables, earthing, cable trays, Remote Radio Units (RRUs), etc.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Remote Radio Unit - RRU Frequency band, Optical Fibre Cable, Hand and Power Tool like - Diagonal Pliers, Linesman Pliers. Mini Hacksaw, Adjustable Wrench, Wire Stripper, Spinner Handle, Soldering Iron, Solder, Digital Tester	

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.

Duration: 16:00	Duration: 20:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of getting adequate training and practice in tower climbing to minimise the injuries and untoward incidents during tower climbing. • Describe the process of inspecting turnbuckles for correct installation, checking the tension of the guy wires on guyed towers, checking guy preforms and verticality of tower etc. before undertaking tower climbing. • Explain the importance of ensuring the availability of well-maintained safety equipment before climbing towers. • List various PPE required for tower climbing. • Explain the importance of ensuring the availability of a fully equipped first aid kit at the work site. • Explain the benefit and importance of using two-way radio for telecom riggers to maintain communication with ground crew. • Explain the applicable RF safety regulations. • Explain the importance of identifying unsafe conditions at the work site and reporting them promptly to the appropriate authority following the applicable reporting process. • Explain the importance of checking the availability of relevant PPE and not undertaking any rigging work	• Demonstrate how to use binoculars to check for loose or missing hardware. • 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. • Demonstrate the use of a safety cable climb or two or more lanyards. • Demonstrate the use of the appropriate PPE while climbing up and down and working on towers. • Demonstrate the process of administering first aid for different types of medical emergencies.

without PPE. • Explain the importance and process of checking the PPE to ensure it is functioning properly and safe to use. • Explain the importance of conducting comprehensive safety planning, including a Job Hazard Analysis (JHA) and an Emergency Action Plan (EAP) for every job site. • Explain the importance and process of checking weather conditions and avoiding any work at heights during adverse weather conditions. • 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. • Explain the importance of continually enhancing safety skills and awareness through regular training. • Describe the process of conducting inspections of tools, hoisting and rigging equipment, and other machinery. • Explain the applicable electrical health and safety standards. • State the appropriate climbing and working practices to be adopted for a range of telecom structures, such as towers, poles and other steel structures. • Explain the applicable health and safety standards and regulations. • Explain the importance and process of preparing and reviewing incident reports for tower climbing incidents to avoid any similar incidents in future.	
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	

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.

Duration: 16:00	Duration: 24:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• 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. • State key performance indicators for the new tasks. • Describe feedback processes and formats. • Explain timelines and goals as well as their relevance to work allocated. • Explain the importance of quality and timely delivery of the product/service. • Explain the escalation matrix and its importance, especially in case of emergencies. • Explain various ways of time and cost management. • State the rules/regulations for maintaining health and safety at the workplace. • 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. • Explain the relevant signage, warnings, labels or descriptions on equipment, etc. while carrying out	• Demonstrate how to record/document tasks completed as per the requirements within specific timelines. • Show how to analyse problems accurately and communicate different possible solutions to the problem. • Demonstrate how to report any identified breaches in health, safety, and security policies and procedures to the designated person. • Demonstrate the process of using safety materials such as goggles, gloves, earplugs, caps, ESD pins, covers, shoes, etc. • Demonstrate the process of handling heavy and hazardous materials with care, while maintaining appropriate posture. • Demonstrate the process of carrying out routine cleaning of tools, machines and equipment. • Demonstrate ways to optimise the use of electricity/energy in various tasks/activities/processes. • Demonstrate the process of performing periodic checks of the functioning of the equipment/machine and rectify wherever required.

work activities. • Describe the procedures to report breaches in health, safety and security. • Describe the organisation's procedures for different emergency situations and the importance of following the same. • Describe different methods of cleaning, disinfection, sterilisation, and sanitisation. • Explain the significance of personal hygiene practice including hand hygiene. • Explain the path of disease transmission. • Describe the correct method of donning and doffing of PPE. • Explain different ways of managing resources and material efficiently. • Explain common electrical problems and common practices of conserving electricity. • Explain categorisation of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics and use of different colours of dustbins. • Describe the organisation's procedures for minimising waste. • Explain waste management and methods of waste disposal. • State common sources of pollution and ways to minimise it.	• Demonstrate ways to use electrical equipment and appliances properly • Demonstrate the process of disposing non-recyclable and hazardous waste as per recommended processes.
Classroom Aids:	
Training Kit (Trainer **G**uide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
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.

Duration: 16:00	Duration: 24:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the organisation's policies on dress code, workplace timings, workplace behaviour, performance management, incentives, delivery standards, information security, etc. • Explain the organisation's hierarchy and escalation matrix • Explain the importance of effective and different means of communication and establishing good working relationships with colleagues and superiors. • Explain the importance of helping colleagues with problems, in order to meet quality and time standards as a team. • Describe different means and methods of communication. • State different types of information that colleagues might need and the importance of providing this information in an appropriate manner. • Describe the organization's policies and procedures for working with colleagues and superiors. • Explain the importance of understanding the consequences of gender based behaviour. • Describe gender based concepts, issues and legislation • State the organization standards and guidelines to be followed for PwD and knowledge about laws, acts and provisions defined for PwD by the	• Demonstrate ways to communicate professionally using different techniques such as face-to-face, telephonic and written means. • Demonstrate appropriate verbal and non-verbal communication while interacting with People with Disability (PwD).

statutory bodies and the right way to use them including various medical conditions associated with PwD • Explain the health and safety requirements at a workplace for PwD. • Describe the process of recruiting people for a particular job profile w.r.t PwD and gender. • 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.	
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
Personal Protective Equipment, Hygiene Equipment and Materials like Sanitizer, Soap, Mask, etc.	

Module 7: On-the-Job Training

Mapped to Telecom Rigger – 5G and Legacy Networks

Mandatory Duration: 00:00	Recommended Duration: 120:00
Location: On-Site	

Terminal Outcomes

1. Explain different support mechanisms and techniques used to climb and work on different types of towers.
2. Explain how to identify various defects in relevant telecommunication equipment.
3. Erect and secure telecom structures, such as steel towers, monopoles, masts and cable tray installations to facilitate the installation of telecom equipment.
4. Install antennas, feeders, microwave dishes, mast head amplifiers and ancillary equipment on steel structures/ monopoles/ towers, using the appropriate safety equipment to ensure safety at heights.
5. Carry out the installation of feeder cables, high jumpers, Tower Mounted Amplifier (TMA), Call Distribution Unit (CDU), Radio Frequency (RF) antenna system and external RF hardware installation, such as RRUs.
6. Carry out bird-proofing and water-proofing of connectors.
7. Carry out the installation of mobile/broadcast antenna systems, panel antennas, head frames, hybriflex cables, feeder cables, earthing, cable trays, Remote Radio Units (RRUs), etc.
8. Use the compass, Global Positioning System (GPS) receiver, Range Finder and other relevant equipment as per the requirement.
9. Prepare survey reports and documentation for client handover.
10. Carry out regular maintenance of telecom equipment and structures using the appropriate maintenance tools and equipment.
11. Decommission and dismantle telecommunications cabling and equipment as per the requirement.
12. Handle heavy and hazardous materials with care, while maintaining appropriate posture.
13. Carry out routine cleaning of tools, machines and equipment.
14. Dispose of non-recyclable and hazardous waste as per recommended processes.

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
12th Class		3	5G Legacy Networks	0	NA	Eligible for ToT Program
Diploma after Class 10th/ITI (for 2 years)	Telecom/ Electronics/IT and other related domains	3	5G Legacy Networks	0	NA	Eligible for ToT Program

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role "**Telecom Rigger - 5G and Legacy Networks**", mapped to QP: "**TEL/Q6212**, v1.0", Minimum accepted score is 80%	Certified for the Job Role: "**Trainer**", mapped to the QP: "**MEP/Q2601**, v1.0". The minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
12th Class		3	5G Legacy Networks	0	NA	Eligible for ToA Program
Diploma after Class 10th/ITI (for 2 years)	Telecom/ Electronics/IT and other related domains	3	5G Legacy Networks	0	NA	Eligible for ToA Program

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role "**Telecom Rigger - 5G and Legacy Networks**", mapped to QP: "**TEL/Q6212**, v1.0", Minimum accepted score is 80%	Certified for the Job Role: "**Assessor**", mapped to the Qualification Pack: "**MEP/Q2701, v1.0**", 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
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	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).
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	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