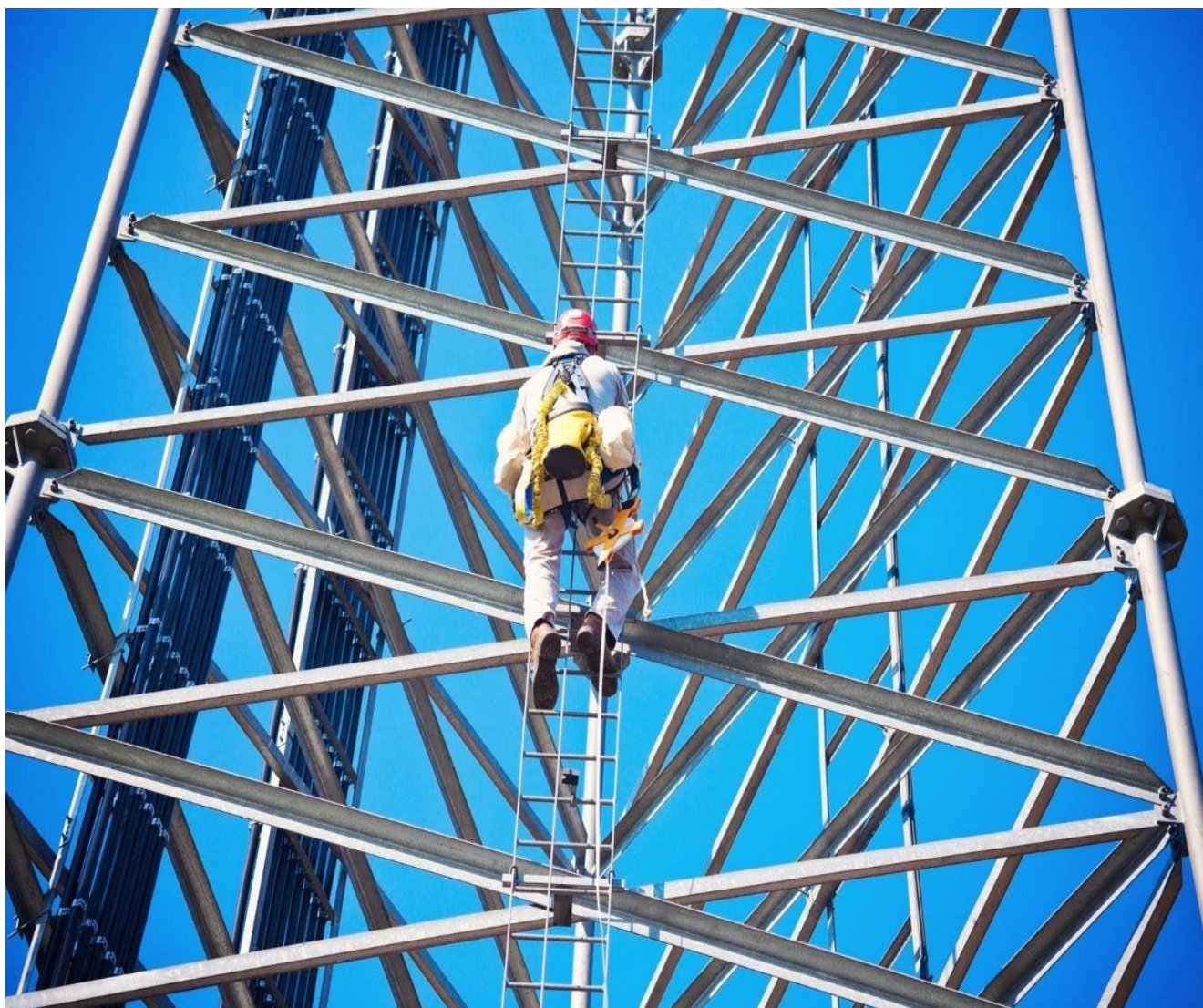




Model Curriculum

QP Name: Telecom Rigger - 5G and Legacy Networks

QP Code: TEL/Q6212

Version: 3.0

NSQF Level: 3.0

Model Curriculum Version: 2.0

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Training Parameters

Sector	Telecom
Sub-Sector	Passive Infrastructure
Occupation	Operations and Maintenance - Passive Infrastructure
Country	India
NSQF Level	3.0
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7422.0802
Minimum Educational Qualification and Experience	10th grade pass OR 8th grade pass with 3 Years of experience experience in the relevant field OR Previous relevant Qualification of NSQF Level 2.5 with 1.5 years of experience in the relevant field*
Pre-Requisite License or Training	NA
Minimum Job Entry Age	NA
Last Reviewed On	08-05-2025
Next Review Date	30-04-2028
NSQC Approval Date	08-05-2025
QP Version	3.0
Model Curriculum Creation Date	8-05-2025
Model Curriculum Valid Up to Date	30-04-2028
Model Curriculum Version	2.0
Minimum Duration of the Course	420 Hours
Maximum Duration of the Course	420 Hours

Program Overview

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

Training Outcomes

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

- Explain the process of installing telecom equipment, including rigging, cabling, alignment, and testing procedures on various tower structures.
- Describe the steps involved in maintaining, upgrading, and decommissioning telecom infrastructure for 5G and legacy networks.
- Discuss the occupational health and safety protocols required for tower climbing, including pre-climb inspections and use of safety equipment.
- Explain sustainable practices in telecom infrastructure installation, including waste management, energy efficiency, and compliance with environmental regulations.
- Discuss the Employability and Entrepreneurship Skills.

Compulsory Modules

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

NOS and Module Details	Theory Duration (Hours)	Practical Duration (Hours)	On-the-Job Training Duration (Mandatory) (Hours)	On-the-Job Training Duration (Recommended) (Hours)	Total Duration (Hours)
TEL/N6310: Assist in the Installation of Telecom Equipment NOS Version No.: 3.0 NSQF Level: 3.0	30:00	70:00	50:00	00:00	150:00
Module 1: Introduction to the Sector and the job role of Telecom Rigger – 5G Legacy Networks	05:00	00:00	00:00	00:00	05:00
Module 2: Preparing for Telecom Equipment Installation	10:00	30:00	20:00	00:00	60:00
Module 3: Assisting in the Installation of Telecom Equipment and Site Testing	15:00	40:00	30:00	00:00	85:00
TEL/N6323: Assist in the Maintenance, Upgrade and Decommissioning of Telecom Equipment and Sites NOS Version No.: 2.0 NSQF Level: 3.0	30:00	60:00	30:00	00:00	120:00
Module 4: Preventive and Corrective Maintenance of Telecom Equipment	15:00	30:00	15:00	00:00	60:00

Module 5: Decommissioning and Recovery of Telecom Equipment	15:00	30:00	15:00	00:00	60:00
TEL/N6246: Follow the Occupational Health and Safety Instructions during Tower Climbing NOS Version No.: 2.0 NSQF Level: 4.0	20:00	30:00	40:00	00:00	90:00
Module 6: Pre-Climb Safety Checks and Worksite Assessment	10:00	15:00	20:00	00:00	45:00
Module 7: Safe Tower Climbing and Emergency Preparedness	10:00	15:00	20:00	00:00	45:00
TEL/N9105: Follow sustainable practices in telecom infrastructure installation NOS Version No.: 1.0 NSQF Level: 4.0	10:00	20:00	00:00	00:00	30:00
Module 8: Sustainability Practices in Telecom Infrastructure Installation	10:00	20:00	00:00	00:00	30:00
DGT/VSQ/N0101: Employability Skills (30 Hours) NOS Version No.: 1.0 NSQF Level: 2	30:00	00:00	00:00	00:00	30:00
Module 9: Employability Skills (30 Hours)	30:00	00:00	00:00	00:00	30:00
Total Duration	120:00	180:00	120:00	00:00	420:00

Module Details

Module 1: Introduction to the Sector and the Job Role of Telecom Rigger – 5G Legacy Networks

Mapped to TEL/N6310, v3.0

Terminal Outcomes:

- Explain the importance of Telecom Sector.
- Discuss the roles and responsibilities of a Telecom Rigger - 5G Legacy Networks.

Duration (in hours): 05:00	Duration (in hours): 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the significance of the telecom sector in modern communication and economic development. • Elucidate the key skills and technical expertise required for a Telecom Rigger - 5G Legacy Networks. • Describe the challenges faced in the installation, maintenance, upgrading, and dismantling of telecom equipment on towers and other structures. • Explain the rigging techniques and installation skills in brief. • Discuss the roles and responsibilities of a Telecom Rigger – 5G Legacy Networks.	-
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Nil	

Module 2: Preparing for Telecom Equipment Installation

Mapped to TEL/N6310, v3.0

Terminal Outcomes:

- Explain the scope of work for telecom equipment installation, including site requirements, blueprints, and safety protocols.
- Describe the tools, materials, and personal protective equipment (PPE) required for safe and efficient installation.

Duration (in hours): 10:00	Duration (in hours): 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the scope of work for telecom equipment installation based on blueprints and site plans. • Describe the different types of telecom equipment, components, and their installation requirements. • Elucidate the importance of conducting a site audit before installation to assess potential hazards. • Enlist the tools, materials, and PPE necessary for telecom installation and maintenance. • Discuss the safety guidelines and regulatory standards applicable to telecom installations. • Explain the procedures for handling and disposing of hazardous materials in telecom installation. • Describe best practices for optimizing telecom infrastructure placement to ensure energy efficiency and sustainability.	• Demonstrate how to read and interpret blueprints and site plans for telecom installations. • Show how to inspect and prepare telecom installation tools, ensuring they are in proper working condition. • Demonstrate the correct use of PPE and adherence to safety protocols at the installation site. • Show how to handle and organize telecom materials, including RF connectors, cables, and other components. • Demonstrate proper procedures for assembling RF connectors, jumpers, and telecom components for installation. • Show how to follow approved procedures for handling and disposing of hazardous materials during installation.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Optical Fibre Cable, RF Safety Kit, Safety Kit, PPE Kit, Screwdrivers, Wire & Cable Strippers	

Module 3: Assisting in the Installation of Telecom Equipment and Site Testing

Mapped to TEL/N6310, v3.0

Terminal Outcomes:

- Describe the process of assembling and installing antennas, feeders, and transmission equipment at telecom sites.
- Explain the procedures for grounding, cable installation, site testing, and documentation for telecom infrastructure.

Duration (in hours): 15:00	Duration (in hours): 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the steps involved in assembling and installing antennas, feeders, and transmission equipment. • Describe the procedures for installing, grounding, and securing telecom cables on towers and rooftop sites. • Elucidate the principles of RF systems, microwave transmission, and their role in telecom networks. • Discuss the importance of alignment, sweep testing, and signal verification in maintaining network quality. • Enlist the tools and equipment required for signal testing, including spectrum analyzers and sweep testers. • Describe the factors that contribute to signal loss and interference in telecom installations. • Explain the purpose and process of conducting Line-of-Sight (LOS) checks for microwave and RF transmission. • Discuss best practices for shelter room installations, including power backup and climate control considerations. • Describe the documentation process for recording installation details and preparing client handover reports.	• Demonstrate the process of assembling and mounting antennas, feeders, and transmission equipment. • Show how to install, route, and secure telecom cables on towers and rooftop sites, ensuring compliance with safety standards. • Demonstrate the grounding techniques for telecom equipment to prevent electrical hazards. • Show how to perform alignment and sweep testing using appropriate tools and techniques. • Demonstrate signal verification procedures to ensure optimal network performance. • Show how to identify and troubleshoot potential signal loss issues in a telecom installation. • Demonstrate the process of conducting a Line-of-Sight (LOS) check for microwave and RF links. • Show how to assist in shelter room installations, including equipment setup and climate control measures. • Demonstrate the process of maintaining installation records and preparing documentation for client handover.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	

Tools, Equipment and Other Requirements

Digital Tester, Remote Radio Unit - RRU Frequency band, Modular & Coaxial Test Equipment, Optical Fibre Cable, Coaxial Cable, Coaxial Connector, Radio Frequency (RF) Connector, Tower Mounted Amplifiers, Wire Stripper, Crimping Pliers, Adjustable Wrench, Soldering Iron, Solder

Module 4: Preventive and Corrective Maintenance of Telecom Equipment

Mapped to TEL/N6323, v2.0

Terminal Outcomes:

- Explain the procedures for preventive and corrective maintenance of telecom towers, antennas, and network equipment.
- Describe the safety protocols, inspection techniques, and troubleshooting methods for telecom infrastructure maintenance.

Duration (in hours): 15:00	Duration (in hours): 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the industry standards and best practices for preventive and corrective maintenance of telecom equipment. • Describe the common structural issues such as corrosion, fatigue, and wind-induced vibrations affecting telecom towers. • Elucidate the importance of securing bolts, brackets, and mounts for structural stability. • Discuss the alignment requirements for antennas, microwave dishes, and feeder cables. • Enlist the preventive maintenance checklists and their role in ensuring network reliability. • Explain the safety protocols for working at heights, including the use of PPE, harnesses, and fall protection systems. • Describe the methods for testing and troubleshooting signal transmission faults using DTF analyzers and other testing tools. • Discuss the procedures for handling, installing, and replacing fiber-optic and hybriflex cables. • Explain the steps involved in network upgrades, including the installation of 3G/4G/5G equipment. • Describe the importance of documenting maintenance activities and updates in logs or digital systems.	• Demonstrate the process of inspecting telecom towers, antennas, and associated structures for damage, misalignment, and wear. • Show how to secure bolts, brackets, and mounts to ensure the structural integrity of telecom installations. • Demonstrate the identification of defects in equipment casings and the replacement of worn-out components. • Show how to follow a preventive maintenance checklist to ensure telecom equipment compliance with industry standards. • Demonstrate the process of conducting audits of rigging installations and support structures. • Show how to check and report the operational status of telecom transmission lines, RRUs, power units, and backup systems. • Demonstrate the correct usage of safety gear such as harnesses, ladders, and boom lifts for accessing telecom structures. • Show how to detect fiber-optic cable damage and measure signal loss using appropriate testing tools. • Demonstrate the installation or upgrading of telecom network components, including 3G/4G/5G equipment. • Show how to organize and handle cables, jumpers, and accessories for structured installations.

	Demonstrate the process of documenting maintenance activities and updating records in logs or digital systems.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Digital Tester, Laser Measuring & Impact Tools, Modular & Coaxial Test Equipment, Cable Cutters, Coaxial Cable, Coaxial Connector, Radio Frequency (RF) Connector, Adjustable Wrench, Screwdrivers, Linesman Pliers, Diagonal Pliers	

Module 5: Decommissioning and Recovery of Telecom Equipment

Mapped to TEL/N6323, v2.0

Terminal Outcomes:

- Describe the procedures for dismantling, recovering, and disposing of telecom infrastructure following industry standards.
- Explain the safety protocols and environmental guidelines for decommissioning telecom equipment.

Duration (in hours): 15:00	Duration (in hours): 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the standard processes for telecom site decommissioning and equipment removal. • Describe the step-by-step procedure for dismantling antennas, mounts, feeder cables, and telecom components. • Discuss the importance of following safety precautions while removing telecom structures and materials. • Elucidate the best practices for recovering, organizing, and storing decommissioned telecom equipment and cabling. • Describe the impact of decommissioning activities on existing network operations and methods to minimize disruptions. • Explain the site decommissioning plans and their role in ensuring compliance with industry standards. • Enlist the documentation and reporting requirements for equipment recovery. • Discuss the environmental and waste management guidelines for handling and disposing of telecom materials.	• Demonstrate the process of dismantling antennas, mounts, feeder cables, and telecom components safely. • Show how to recover and organize decommissioned telecom equipment and cabling for reuse or disposal. • Demonstrate the correct use of safety gear and tools while removing redundant telecom structures. • Show how to follow a site decommissioning plan to ensure compliance with industry standards. • Demonstrate the techniques to minimize network disruption during the decommissioning process. • Show how to document and report the recovered equipment and materials for inventory tracking. • Demonstrate the correct methods for handling, storing, and disposing of telecom materials following environmental regulations.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Mini Hacksaw, Cable Cutters, Wire & Cable Strippers, Adjustable Wrench, Tower Mounted Amplifiers, Remote Radio Unit - RRU Frequency band, Scissors & Knives, Safety Kit, PPE Kit.	

Module 6: Pre-Climb Safety Checks and Worksite Assessment

Mapped to TEL/N6246, v2.0

Terminal Outcomes:

- Explain the procedures for conducting pre-climb safety inspections and identifying potential hazards at telecom worksites.
- Describe the importance of PPE, environmental assessments, and compliance with safety regulations before climbing towers.

Duration (in hours): 10:00	Duration (in hours): 15:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain industry best practices for safe tower climbing and fall protection. • Describe the importance of well-maintained and certified safety equipment. • Elucidate the essential PPE requirements for tower climbing. • Discuss the procedures for conducting a visual inspection of the tower to detect loose hardware, rust, or structural damage. • Explain how to identify and mitigate climbing hazards such as bird nests, insect infestations, or external attachments. • Describe the process of inspecting turnbuckles and verifying proper tensioning of guy wires in guyed towers. • Enlist the steps to examine anchor points and supporting components for corrosion or mechanical damage. • Discuss the significance of verifying the vertical alignment of the tower using a plumb line or inclinometer. • Explain the importance of reporting identified defects and ensuring necessary repairs before climbing. • Describe the methods for conducting a Job Hazard Analysis (JHA) and developing an Emergency Action Plan (EAP). • Discuss electrical hazard mitigation strategies and safety regulations, including proximity to power lines. • Explain weather assessment techniques and decision-making for halting tower operations in extreme conditions.	• Demonstrate a visual inspection of the tower to detect structural defects before climbing. • Show how to identify and mitigate climbing hazards such as bird nests, insect infestations, or loose attachments. • Demonstrate the inspection of turnbuckles and verification of guy wire tensioning in guyed towers. • Show how to examine anchor points and supporting components for corrosion or mechanical damage. • Demonstrate the process of verifying vertical tower alignment using a plumb line or inclinometer. • Show how to inspect ladders, hoisting, and rigging equipment for operational readiness. • Demonstrate the proper pre-use inspection of PPE, including harnesses, lanyards, helmets, gloves, and boots. • Show how to measure RF exposure levels to ensure compliance with safety standards. • Demonstrate how to identify electrical hazards and implement mitigation strategies. • Show how to conduct a Job Hazard Analysis (JHA) and develop an Emergency Action Plan (EAP). • Demonstrate how to measure wind velocity and assess weather conditions for safe tower climbing.

- | | |
|--|---|
| <ul style="list-style-type: none"> Describe the procedures for reading and interpreting safety manuals and SOPs. Elucidate the record-keeping process for safety inspections and maintenance logs. | <ul style="list-style-type: none"> Show how to position vehicles and equipment safely at the worksite. Demonstrate the correct procedure for documenting safety inspections and maintenance logs. |
|--|---|

Classroom Aids

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Helmet, Tower Climbing Kits, RF Safety Kit, Harnesses, Safety Kit, PPE Kit, Laser Measuring & Impact Tools

Module 7: Safe Tower Climbing and Emergency Preparedness

Mapped to TEL/N6246, v2.0

Terminal Outcomes:

- Explain the procedures for safe tower climbing, fall prevention, and the correct use of safety equipment.
- Describe emergency preparedness strategies, including first aid, incident reporting, and hazard mitigation.

Duration (in hours): 10:00	Duration (in hours): 15:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain industry safety protocols for tower climbing and fall protection. • Describe the process of registering at the worksite and adhering to safety protocols before climbing. • Elucidate the importance of securing a full-body harness and maintaining 100% tie-off at all times. • Discuss the correct use of a safety cable climb system or double lanyards while moving on the tower. • Explain how to properly use PPE following manufacturer guidelines. • Describe standard climbing procedures to prevent falls or slips. • Discuss the importance of maintaining continuous communication with the ground crew via a two-way radio. • Explain how to identify and report health issues that may impact climbing performance. • Elaborate on maintaining a safe distance from live power lines and coordinating de-energization. • Describe the procedures for placing warning signs near live electrical zones to prevent accidents. • Explain the key industry safety regulations (e.g., OSHA and local standards) relevant to telecom tower climbing. • Discuss the procedures for administering basic first aid in case of injuries or medical emergencies.	• Demonstrate the registration process and adherence to safety protocols before climbing. • Show how to properly secure a full-body harness and maintain 100% tie-off at all times. • Demonstrate the correct use of a safety cable climb system or double lanyards while moving on the tower. • Show how to inspect, wear, and adjust PPE according to manufacturer guidelines. • Demonstrate standard climbing techniques to prevent falls or slips. • Show how to use a two-way radio to maintain continuous communication with the ground crew. • Demonstrate how to report health issues that may impact climbing performance. • Show how to identify and maintain a safe distance from live power lines or coordinate de-energization. • Demonstrate the proper placement of warning signs near live electrical zones. • Show how to administer basic first aid for common tower climbing injuries. • Demonstrate the process of documenting and reporting unsafe conditions and workplace hazards. • Show how to prepare an incident report following an accident or emergency.

- Describe the process of preparing incident reports for workplace hazards or accidents.
- Explain decision-making strategies for emergencies, including extreme weather and equipment failure.
- Discuss team collaboration techniques for maintaining a risk-free work environment.

Classroom Aids

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films

Tools, Equipment and Other Requirements

Helmet, Tower Climbing Kits, Harnesses, RF Safety Kit, Safety Kit, PPE Kit, Scissors & Knives, Screwdrivers

Module 8: Sustainability Practices in Telecom Infrastructure Installation

Mapped to TEL/N9105, v1.0

Terminal Outcomes:

- Explain sustainable practices in telecom infrastructure installation, including waste management and energy efficiency.
- Discuss compliance with environmental regulations and the importance of maintaining records of sustainability measures.

Duration (in hours): 10:00	Duration (in hours): 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain national and international environmental laws and regulations governing telecom infrastructure installation. • Describe e-waste management and recycling policies applicable to telecom sites. • Identify occupational safety and health standards related to environmental practices. • List recyclable and refurbishable telecom components and their proper handling techniques. • Define methods for reducing electronic waste through responsible procurement and reuse. • Explain advancements in eco-friendly telecom infrastructure and the use of renewable energy sources. • Elucidate techniques for optimizing energy consumption in telecom operations. • Describe proper disposal methods for hazardous and non-hazardous waste. • Explain procedures for collaborating with authorized agencies for waste collection and disposal. • Identify best practices for reducing the carbon footprint of telecom installations.	• Show how to identify telecom components suitable for recycling or refurbishment. • Demonstrate the process of sorting electronic and non-electronic waste according to disposal protocols. • Show the correct labeling and storage of recyclable and refurbishable components. • Demonstrate the safe handling and disposal of hazardous and non-hazardous waste. • Show the proper coordination process with authorized e-waste recycling units or disposal agencies. • Demonstrate the use of energy-efficient tools and equipment during telecom installations. • Show how to optimize infrastructure placement to minimize energy consumption. • Demonstrate the maintenance of records for waste disposal and sustainability measures. • Show how to guide team members on sustainable practices and encourage environmentally responsible habits.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	

Tools, Equipment and Other Requirements

Protective gloves, safety goggles, e-waste segregation bins, hazardous waste containers, labels and markers, energy-efficient power tools, digital multimeter, battery handling kits, circuit testers, recycling checklists, record-keeping logs.

Module 9: Employability Skills (30 Hours)

Mapped to DGT/VSQ/N0101, v1.0

Duration: 30:00 Hours

Key Learning Outcomes

Introduction to Employability Skills Duration: 1 Hour

After completing this programme, participants will be able to:

1. Discuss the importance of Employability Skills in meeting the job requirements

Constitutional values - Citizenship Duration: 1 Hour

2. Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.
3. Show how to practice different environmentally sustainable practices

Becoming a Professional in the 21st Century Duration: 1 Hour

4. Discuss 21st-century skills.
5. Display a positive attitude, self-motivation, problem-solving, time management skills and continuous learning mindset in different situations.

Basic English Skills Duration: 2 Hours

6. Use appropriate basic English sentences/phrases while speaking

Communication Skills Duration: 4 Hours

7. Demonstrate how to communicate in a well-mannered way with others.
8. Demonstrate working with others in a team

Diversity & Inclusion Duration: 1 Hour

9. Show how to conduct oneself appropriately with all genders and PwD
10. Discuss the significance of reporting sexual harassment issues in time

Financial and Legal Literacy Duration: 4 Hours

11. Discuss the significance of using financial products and services safely and securely.
12. Explain the importance of managing expenses, income, and savings.
13. Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws

Essential Digital Skills Duration: 3 Hours

14. Show how to operate digital devices and use the associated applications and features, safely and securely
15. Discuss the significance of using the internet for browsing, and accessing social media platforms, safely and securely

Entrepreneurship Duration: 7 Hours

16. Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges

Customer Service Duration: 4 Hours

17. Differentiate between types of customers

18. Explain the significance of identifying customer needs and addressing them

19. Discuss the significance of maintaining hygiene and dressing appropriately

Getting ready for Apprenticeship & Jobs Duration: 2 Hours

20. Create a biodata

21. Use various sources to search and apply for jobs

22. Discuss the significance of dressing up neatly and maintaining hygiene for an interview

23. Discuss how to search and register for apprenticeship opportunities

Module 10: On-the-Job Training

Mapped to Telecom Rigger - 5G and Legacy Networks

Mandatory Duration: 120:00	Recommended Duration: 00:00
Location: On-Site	
Terminal Outcomes • Demonstrate how to determine the scope of work before telecom equipment installation. • Show how to prepare and set up tools, materials, and safety gear for telecom installations. • Demonstrate the process of assisting in rigging, cabling, and mounting telecom equipment on towers. • Show how to align antennas and perform a Line-of-Sight (LOS) check. • Demonstrate the correct method of assisting in shelter room installations. • Show how to conduct preventive and corrective maintenance of telecom equipment. • Demonstrate procedures for upgrading telecom network components. • Show how to safely dismantle and recover decommissioned telecom equipment. • Demonstrate how to perform a pre-climb tower inspection and identify hazards. • Show how to use and inspect personal protective equipment (PPE) and climbing gear. • Demonstrate safe climbing techniques while maintaining 100% tie-off. • Show how to assess and mitigate electrical and environmental hazards at telecom sites. • Demonstrate best practices for managing hazardous and e-waste disposal at telecom sites. • Show how to implement energy-efficient measures and resource optimization in telecom infrastructure. • Demonstrate how to document and report safety, maintenance, and environmental compliance activities.	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialisation	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate	Telecom/ Electronics/ IT and other related domains	5	5G Legacy Networks			

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Telecom Rigger - 5G and Legacy Networks” mapped to QP: “TEL/Q6212, v3.0”. Minimum accepted score is 80%.	Recommended that the Trainer is certified for the Job Role: “Trainer (VET and Skills)”, mapped to the Qualification Pack: “MEP/Q2601, v3.0”. 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	
Graduate	Telecom/ Electronics/ IT and other related domains	5	5G Legacy Networks			

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Telecom Rigger - 5G and Legacy Networks” mapped to QP: “TEL/Q6212, v3.0”. Minimum accepted score is 80%.	Certified for the Job Role: “Assessor (VET and Skills)”, mapped to the Qualification Pack: “MEP/Q2701, v3.0”, 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 levels 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

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

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	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 it 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
NCVET	National Council for Vocational Education and Training
QP	Qualification Pack
MC	Model Curriculum
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
NCO	National Classification of Occupations
ES	Employability Skills
TSSC	Telecom Sector Skill Council
TRAI	Telecom Regulatory Authority of India
GBT	Ground-Based Tower
RTT	Roof-Top Tower
LOS	Line-of-Sight
PPE	Personal Protective Equipment
OHS	Occupational Health and Safety
RF	Radio Frequency
BTS	Base Transceiver Station
BBU	Baseband Unit
RRU	Remote Radio Unit
e-Waste	Electronic Waste
OJT	On-the-Job Training
PM	Preventive Maintenance
CM	Corrective Maintenance
EMS	Environmental Management System
DC	Direct Current