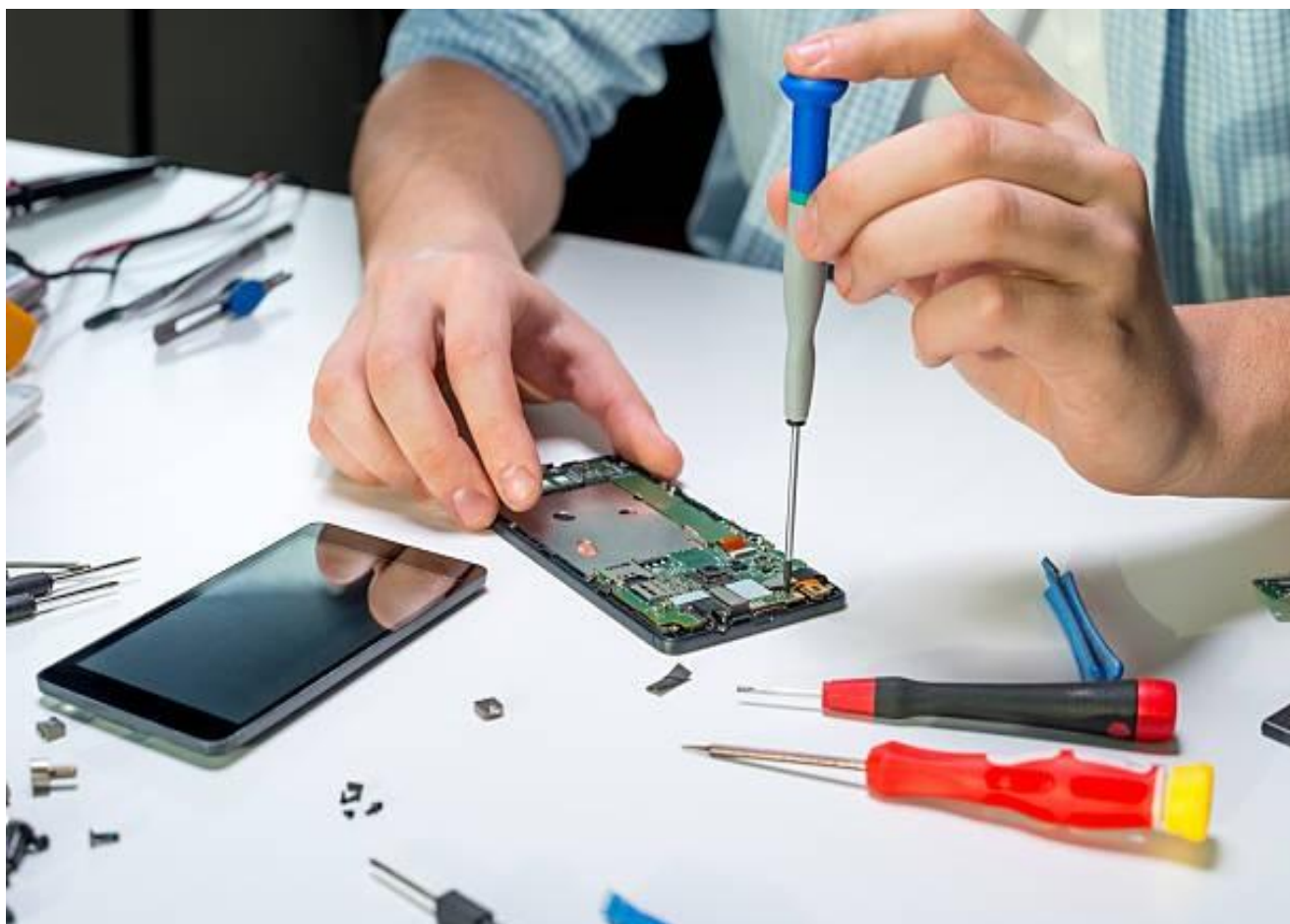




Model Curriculum

QP Name: Handheld Devices (Mobile & Accessories) Technician

QP Code: TEL/Q2201

Version: 5.0

NSQF Level: 4.0

Model Curriculum Version: 5.0

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

Sector	Telecom
Sub-Sector	Handset
Occupation	Customer Service - Handset Segment
Country	India
NSQF Level	4.0
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7422.0203
Minimum Educational Qualification and Experience	12th grade pass OR Completed 2nd year of 3-year diploma after 10th in Electronics and Communication Engineering/ Electrical Engineering/ Computer Hardware and Networking OR 10th grade pass with 3 years of experience in handheld device repair OR Previous relevant Qualification of NSQF Level 3.0 with 3 years of experience in handheld device repair OR Previous relevant Qualification of NSQF Level 3.5 with 1.5 years of experience in handheld device repair
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	5.0
Model Curriculum Creation Date	22-03-2025
Model Curriculum Valid Up to Date	30-04-2028
Model Curriculum Version	5.0
Minimum Duration of the Course	480 Hours
Maximum Duration of the Course	480 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 repairing and testing mobile phones as per industry standards.
- Describe the key steps involved in repairing and testing tablets effectively.
- Elucidate the process of diagnosing issues and repairing laptops and mobile accessories.
- Discuss the importance of following sustainability practices in telecom operations.
- 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/N2213: Perform basic hardware and software repair of Android mobile phones and iPhones NOS Version No.: 2.0 NSQF Level: 4.0	50:00	100:00	30:00	00:00	180:00
Module 1: Introduction to the sector and the job role of a Handheld Devices (Mobile & Accessories) Technician	05:00	00:00	00:00	00:00	05:00
Module 2: Diagnosis and Preparation for Basic Hardware and Software Repair of Android Mobile Phones and iPhones	30:00	60:00	15:00	00:00	105:00
Module 3: Basic Repairing, Testing, and Post-Repair Activities for Android Mobile Phones and iPhones	15:00	40:00	15:00	00:00	70:00
TEL/N2214: Perform basic hardware and software repair of Android tablets and iPads NOS Version No.: 2.0 NSQF Level: 4.0	30:00	60:00	30:00	00:00	120:00

Module 4: Pre-Repair and Basic Repair Procedures for Android Tablets and iPads	15:00	30:00	15:00	00:00	60:00
Module 5: Basic Mobile Phone and Tablet Chip-Level Repairs	15:00	30:00	15:00	00:00	60:00
TEL/N2218: Perform basic hardware and software repair of Windows laptops, MacBook, and mobile accessories NOS Version No.: 1.0 NSQF Level: 4.0	30:00	30:00	30:00	00:00	90:00
Module 6: Basic Repairing of Windows Laptops, MacBook and and Mobile Accessories	30:00	30:00	30:00	00:00	90:00
TEL/N9108: Follow sustainability practices in telecom operations NOS Version No.: 1.0 NSQF Level: 4.0	10:00	20:00	00:00	00:00	30:00
Module 7: Sustainability Practices in Telecom Operations	10:00	20:00	00:00	00:00	30:00
DGT/VSQ/N0102: Employability Skills (60 Hours) NOS Version No.: 1.0 NSQF Level: 4.0	60:00	00:00	00:00	00:00	60:00
Module 8: Employability Skills (60 Hours)	60:00	00:00	00:00	00:00	60:00
Total Duration	180:00	210:00	90:00	00:00	480:00

Module Details

Module 1: Introduction to the sector and the job role of a Handheld Devices (Mobile & Accessories) Technician

Mapped to TEL/N2213, v2.0

Terminal Outcomes:

- Explain the importance of Telecom Sector.
- Discuss the role and responsibilities of a Handheld Devices (Mobile & Accessories) Technician.

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 the repair and maintenance of mobile phones and tablets. • Elucidate the key skills and technical expertise required for a Handheld Devices (Mobile & Accessories) Technician to diagnose and fix hardware and software issues. • Describe the challenges faced in troubleshooting, repairing, and testing mobile phone and tablet components, including circuit boards, screens, and batteries. • Determine the impact of precision and quality control in mobile phone and tablet repair to ensure optimal device performance and customer satisfaction. • Discuss the key tasks undertaken by a Handheld Devices (Mobile & Accessories) Technician. • Explain the importance of a Handheld Devices (Mobile & Accessories) Technician in maintaining high service standards and ensuring seamless device functionality.	
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: Diagnosis and Preparation for Basic Hardware and Software Repair of Android Mobile Phones and iPhones

Mapped to TEL/N2213, v2.0

Terminal Outcomes:

- Explain the process of analyzing, diagnosing, and categorizing faults in Android mobile phones and iPhones.
- Describe the necessary preparations before repairing mobile phones.

Duration (in hours): 30:00	Duration (in hours): 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the workflow and key steps involved in fault diagnosis, repair planning, and verification of mobile phones. • Discuss the initial documentation requirements concerning faulty mobile phones in line with service protocol. • Describe the use of AI-enabled diagnostic tools in identifying issues in Android and iOS devices. • Identify various hardware components and modules in mobile phones, such as SoC, UFS, RFFE, and IoT modules, and explain common faults associated with them. • Explain fault diagnosis techniques for 5G-enabled and modular devices, including foldable and curved screen technologies. • Describe the functions and repair considerations of Android and iOS operating systems, including data handling and cloud compatibility. • Explain troubleshooting techniques for software-related issues including flashing, IMEI repair, and unlocking procedures. • Explain the use and calibration procedures of diagnostic and repair tools such as JTAG, UART, oscilloscopes, and Miracle Box. • Describe the steps and safety guidelines for setting up a clean, ESD-compliant workbench and energy-efficient repair station. • Outline repair cost estimation methods, Beyond Economic Repair (BER) assessment,	• Demonstrate how to organize all required tools and equipment such as SMT rework stations, hot air guns, infrared preheaters, and UMT dongles before beginning repair work. • Show how to clean and prepare the repair bench to ensure it is dust-free, calibrated and compliant with Electrostatic Discharge (ESD) protocols. • Demonstrate the correct calibration of diagnostic and repair tools following manufacturer specifications. • Show relevant operational readiness checks for environmentally sustainable repair stations and lead-free soldering tools. • Demonstrate secure methods of backing up and restoring user data on Android and iOS devices using authorized tools, ensuring compatibility with cloud storage platforms. • Show appropriate safety procedures for handling mobile devices with foldable screens or modular components before repair begins. • Show how to use diagnostic tools such as multimeters, SMD testers, and UMT dongles to detect hardware faults in mobile components like charging circuits, motherboards, and touchscreens. • Demonstrate the use of schematic diagrams and specialized tools for diagnosing issues in UFS storage, RFFE modules, and SoC-based systems. • Demonstrate the calibration infrared preheaters, hot air guns, and SMT rework

and the principles of customer communication and service-level planning. • Describe documentation procedures for recording identified faults, replaced components, repair timelines, and post-repair reporting. • Discuss SMT techniques, use of infrared preheaters, and the importance of correct temperature and tool selection for mobile repairs. • Describe Root Cause Analysis (RCA) and PDCA problem-solving methods relevant to mobile repair diagnostics.	stations according to manufacturer guidelines.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Ultrasonic Cleaner Machine, Wrist Strap, Tweezers, Soldering Iron, Solder Wire, Soldering Flux, Screw Drivers, Rework Station, PCB Holder, Openers, Nose Plier, Multimeter, Matching Connector/Adaptors, LCD Tester, LCD Glass Separator, Jumper Wire, Hot Air Blower, DC Power Supply, Connecting Cables (for connecting smartphone/feature phones to PC/Laptop), Cleaning Solution (e.g., IPA - Isopropyl Alcohol), Cleaning Brush, Battery Booster, Antistatic Gloves and Mats.	

Module 3: Basic Repairing, Testing, and Post-Repair Activities for Android Mobile Phones and iPhones

Mapped to TEL/N2213, v2.0

Terminal Outcomes:

- Discuss the steps involved in repairing and testing Android mobile phones and iPhones.
- Describe the key post-repair activities to ensure device functionality and quality.

Duration (in hours): 15:00	Duration (in hours): 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the structure and functioning of key components such as processors, ICs, charging circuits, touchscreens, and IoT modules in Android and iOS mobile phones. • Illustrate the concept of RFFE (Radio Frequency Front-End) modules and their role in signal transmission and connectivity in modern mobile phones. • Discuss screen repair techniques specific to foldable and curved displays, including the role of OCA lamination and bubble remover machines. • Describe the criteria for determining repair feasibility based on cost estimates, warranty status, and BER (Beyond Economic Repair) assessment. • Explain documentation procedures and their importance in maintaining accurate records of repair history, replaced components, and quality checks. • Explain safe handling protocols and the importance of ESD compliance, energy efficiency, and environmental safety during mobile phone repair. • Outline the environmental and safety regulations related to e-waste disposal and responsible handling of faulty or hazardous components. • Discuss the importance of verifying device performance and quality assurance benchmarks in post-repair activities. • Explain the process of returning repaired devices to designated personnel and updating the repair completion status.	• Show how to systematically disassemble and reassemble mobile phones using manufacturer-approved tools without causing damage to internal components. • Demonstrate component-level repair using micro-soldering tools, SMT soldering, hot air guns, and infrared preheaters, ensuring safe handling of heat-sensitive components. • Show how to identify, replace, or repair faulty components such as screens, ports, and ICs, following manufacturer specifications and compatibility standards. • Demonstrate the repair of foldable and curved screens using OCA lamination machines and bubble removers. • Show how to perform software repairs such as system flashing, IMEI programming, and unlocking using tools like Miracle Box, UMT dongle, 3uTools, and iTunes. • Show the use of appropriate diagnostic tools (e.g., oscilloscopes, JTAG, UART) to test mobile phone functionality, including signal testing and connectivity checks for RFFE modules. • Demonstrate appropriate verification checks to confirm that all identified faults have been resolved and the device meets quality and performance standards. • Show how to clean and solder PCBs to ensure minimal residue and high-quality electrical connections. • Demonstrate proper cleaning and organization of the repair area after completing tasks, including safe handling

	and return of tools and unused components. • Show how to segregate and dispose of e-waste in compliance with safety, environmental, and recycling regulations. • Demonstrate accurate documentation of repair activities, including diagnosed faults, replaced components, tools used, turnaround time (TAT), and customer feedback, as per organizational standards.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Ultrasonic Cleaner Machine, Wrist Strap, Tweezers, Soldering Iron, Solder Wire, Soldering Flux, Screw Drivers, Rework Station, PCB Holder, Openers, Nose Plier, Multimeter, Matching Connector/Adaptors, LCD Tester, LCD Glass Separator, Jumper Wire, Hot Air Blower, DC Power Supply, Connecting Cables (for connecting smartphone/feature phones to PC/Laptop), Cleaning Solution (e.g., IPA - Isopropyl Alcohol), Cleaning Brush, Battery Booster, Antistatic Gloves and Mats.	

Module 4: Pre-Repair and Basic Repair Procedures for Android Tablets and iPads

Mapped to TEL/N2214, v2.0

Terminal Outcomes:

- Explain the essential steps involved in performing pre-repair activities for Android tablets and iPads.
- Describe the process of repairing and testing Android tablets and iPads to ensure functionality.

Duration (in hours): 15:00	Duration (in hours): 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the common hardware and software issues in Android tablets and iPads, including faults in SoC, RFFE modules, and modular components. • Describe the structure and handling considerations of foldable screens, curved displays, and IoT-enabled tablets. • Explain the correct use of diagnostic and repair tools such as multimeters, SMD testers, UMT dongles, oscilloscopes, and infrared preheaters. • Illustrate the process of interpreting service manuals, exploded view charts, block diagrams, and troubleshooting guides for identifying faults. • Describe software repair processes including system updates, flashing, unlocking, and tool-specific operations using iTunes, 3uTools, and UMT. • Discuss criteria and procedures for identifying and retrieving compatible spare parts from inventory. • Explain how to escalate unresolved issues to supervisors for appropriate technical resolution. • Explain how to receive and log faulty devices, document customer complaints, and interpret repair instructions including timelines and special requirements. •	• Demonstrate how to use AI-enabled and real-time diagnostic tools to identify hardware and software faults in tablets. • Demonstrate dismantling of Android tablets and iPads as per manufacturer instructions without damaging foldable or modular components. • Show how to diagnose faults in internal components like motherboards, charging circuits, and touchpads using multimeters, SMD testers, and oscilloscopes. • Show software-level procedures such as flashing, unlocking, and updates using tools like UMT and 3uTools. • Demonstrate safe and accurate use of infrared preheaters and hot air rework stations for PCB-level diagnostics and component replacement. • Show reassembly of tablets, ensuring proper alignment and installation of modular parts and connectors. • Demonstrate functional testing of repaired tablets using specialized tools to validate performance, including RFFE module diagnostics.

Classroom Aids

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

Tools, Equipment and Other Requirements

Ultrasonic Cleaner Machine, Wrist Strap, Tweezers, Soldering Iron, Solder Wire, Soldering Flux, Screw Drivers, Rework Station, PCB Holder, Openers, Nose Plier, Multimeter, Matching Connector/Adaptors, LCD Tester, LCD Glass Separator, Jumper Wire, Hot Air Blower, DC Power Supply, Connecting Cables (for connecting smartphone/feature phones to PC/Laptop), Cleaning Solution (e.g., IPA - Isopropyl Alcohol), Cleaning Brush, Battery Booster, Antistatic Gloves and Mats.

Module 5: Basic Mobile Phone and Tablet Chip-Level Repairs

Mapped to TEL/N2214, v2.0

Terminal Outcomes:

- Discuss the techniques used for performing chip-level repairs in mobile phones and tablets.
- Elucidate the key post-repair activities required to maintain quality and compliance.

Duration (in hours): 15:00	Duration (in hours): 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the basic functions and roles of chip-level components such as resistors, capacitors, inductors, diodes, and small ICs found on mobile and tablet PCBs. • Describe common chip-level faults including dry solder joints, minor shorts, burnt passive components, and disconnected pads. • Explain how to interpret basic schematic diagrams and board layouts to locate faults and assess issues in chip-level components like charging ports, motherboards, touchpads, and displays. • Explain SMT-compatible rework techniques for basic chip-level repair, including preheating, positioning, and safe soldering of components. • Describe the correct temperature ranges and handling precautions when working with hot air guns and infrared preheaters to avoid PCB or component damage. • Explain thermal management techniques required during infrared-based diagnostics and chip-level repair to maintain PCB integrity. • Explain safety protocols for ESD protection and safe handling of micro-components during chip-level work. • Describe the construction of multilayer PCBs and the importance of identifying appropriate layers before applying heat. • Explain proper cleaning techniques using agents like isopropyl alcohol and non-static brushes after component removal or rework. • Describe how to identify damaged or dislodged small components visually and	• Demonstrate how to safely remove small surface-mounted components such as resistors, capacitors, or ICs using a soldering iron or hot air gun. • Demonstrate SMT-compatible chip-level repairs, including the repositioning or replacement of ICs and components using hot air guns and infrared preheaters. • Show how to identify and replace visibly burnt or cracked passive components on a PCB. • Demonstrate how to use a multimeter to check for continuity, resistance, or short circuits at the component level. • Show how to use a magnifier or microscope to inspect soldering quality and identify common issues like cold joints, lifted pads, or solder bridging. • Demonstrate how to clean flux and other residues from the PCB after repair using appropriate solvents and tools. • Show how to apply solder and flux correctly while replacing small components, ensuring no damage to surrounding areas. • Demonstrate the safe handling of chip-level tools and components, maintaining ESD safety and avoiding accidental displacement of nearby parts. • Show basic jumper wiring techniques to reconnect dislodged tracks or pads on the PCB. • Demonstrate the setup and preparation of chip-level repair tools, including tip selection, temperature setting, and workspace organization.

link them to symptoms in device performance. • Explain the characteristics and application differences between lead-free and traditional solder materials in chip-level repairs. • Describe the basic tools required for chip-level work such as magnifiers, micro soldering tips, flux, antistatic mats, infrared preheaters, and precision tweezers.	
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Ultrasonic Cleaner Machine, Wrist Strap, Tweezers, Soldering Iron, Solder Wire, Soldering Flux, Screw Drivers, Rework Station, PCB Holder, Openers, Nose Plier, Multimeter, Matching Connector/Adaptors, LCD Tester, LCD Glass Separator, Jumper Wire, Hot Air Blower, DC Power Supply, Connecting Cables (for connecting smartphone/feature phones to PC/Laptop), Cleaning Solution (e.g., IPA - Isopropyl Alcohol), Cleaning Brush, Battery Booster, Antistatic Gloves and Mats.	

Module 6: Basic Repairing of Windows Laptops, MacBook and and Mobile Accessories

Mapped to TEL/N2218, v1.0

Terminal Outcomes:

- Explain the process of diagnosing faults in Windows laptops, MacBook and mobile accessories using appropriate diagnostic tools and service manuals.
- Describe the steps involved in performing Windows laptop and MacBook repairs, including hardware and software troubleshooting.
- Discuss the techniques used to repair mobile accessories, such as fixing charging circuits, replacing components, and ensuring functionality.
- Elucidate the key post-repair activities, including quality checks, documentation, and e-waste disposal.

Duration (in hours): 30:00	Duration (in hours): 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the common faults and symptoms in Windows and Apple laptops, such as power issues, boot failures, display problems, and overheating. • Describe the internal components of laptops, including motherboard, RAM, SSD/HDD, keyboard, I/O ports, and cooling systems, along with their functions and fault indicators. • Explain standard troubleshooting methods for identifying issues in laptop power supply, battery health, connectivity ports, and wireless modules. • Describe common issues in mobile accessories such as chargers, earphones, power banks, and their associated fault patterns. • Explain the structure and circuitry of mobile accessories including fuses, connectors, batteries, resistors, and small ICs. • Describe the software tools and processes for reinstalling and repairing operating systems using macOS Recovery, Internet Recovery, Windows PE, and OEM tools.	• Demonstrate how to dismantle and reassemble a laptop following manufacturer instructions without damaging internal components. • Show the procedure to replace or upgrade laptop components such as RAM, SSD/HDD, keyboard, and cooling fans. • Demonstrate how to perform software installation and updates on Windows and macOS using relevant tools such as macOS Recovery or Windows PE. • Show how to test and verify laptop battery health, power input, and I/O ports using multimeters and battery diagnostic software. • Demonstrate safe opening and inspection of mobile accessories such as chargers and earphones using ESD-safe tools. • Show how to test and replace basic electronic components (e.g., connectors, resistors, fuses, or batteries) in mobile accessories using multimeters and soldering tools. • Demonstrate how to perform basic soldering and desoldering on accessory

- | | |
|--|--|
| <ul style="list-style-type: none"> • Explain the steps and precautions for replacing laptop hardware components such as RAM, storage drives, or fans. • Describe the use of diagnostic software such as Apple Diagnostics, CoconutBattery, Windows Memory Diagnostic, and CrystalDiskInfo. • Explain the importance and methods of quality assurance testing for repaired laptops and accessories. • Describe the safety precautions for Electrostatic Discharge (ESD) when handling laptop and accessory components. • Describe proper documentation methods for logging repair activities, components replaced, service duration, and customer feedback. • Explain indicators for repair versus replacement decisions based on cost, feasibility, and warranty policies. • Explain the importance of cleaning the repair bench and safely returning tools to their designated storage after repair tasks. | <p>circuits using hot air rework stations or soldering irons.</p> <ul style="list-style-type: none"> • Show the use of diagnostic software and tools to check laptop hardware health (RAM, storage, wireless modules) and ensure functionality post-repair. • Demonstrate final testing of repaired laptops and mobile accessories to confirm they meet performance and safety standards. • Show the segregation and safe disposal of faulty laptop parts or mobile accessory components in line with e-waste management protocols. |
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Classroom Aids

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

Tools, Equipment and Other Requirements

Multimeter, LCD Tester, DC Power Supply, Connecting Cables, Screw Drivers, Tweezers, Soldering Iron, Solder Wire, Soldering Flux, Rework Station, Hot Air Blower, PCB Holder, Cleaning Solution (e.g., IPA), Cleaning Brush, Openers, Jumper Wire, Matching Connectors/Adaptors, LCD Glass Separator, Battery Booster, Ultrasonic Cleaner Machine, Antistatic Gloves and Mats, Nose Plier

Module 7: Sustainability Practices in Telecom Operations

Mapped to TEL/N9108, v1.0

Terminal Outcomes:

- Describe the methods for identifying recyclable, reusable, and disposable components in tablet repairs.
- Explain the importance of adhering to environmental standards in electronic repairs.
- Discuss the significance of following sustainable repair practices in the industry.
- Determine the key sustainability protocols that must be complied with during tablet repairs.

Duration (in hours): 10:00	Duration (in hours): 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
• Explain the relevant environmental laws and regulations for the telecom sector. • Describe the different recyclable and hazardous components in telecom equipment. • Discuss the relevant tools and techniques that support sustainable repair practices. • Elucidate the safe handling, storage, and disposal of hazardous materials. • Explain the process of e-waste recycling through certified vendors. • Describe the documentation required for sustainability and waste disposal. • Determine the proper waste segregation and sorting guidelines in the telecom industry. • Discuss the industry's best practices for reducing environmental impact.	• Demonstrate how to identify telecom components that can be recycled, refurbished, or reused during repair and maintenance. • Show how to sort and evaluate dismantled parts into recyclable, reusable, and hazardous waste categories for proper disposal. • Demonstrate how to examine faulty components for potential refurbishment and document findings. • Show how to label and segregate hazardous materials for specialized disposal, ensuring compliance with safety regulations. • Demonstrate how to follow guidelines for the safe handling, storage, and disposal of hazardous and non-hazardous materials. • Show how to maintain compliance with environmental regulations and record all e-waste disposal and recycling activities as per company policies. • Demonstrate the correct use of protective equipment when handling hazardous waste to prevent environmental contamination. • Show how to conduct regular audits of waste management processes to ensure alignment with sustainability standards.

	• Demonstrate how to use repair techniques that minimize waste generation and energy consumption. • Show how to select energy-efficient and eco-friendly spare parts for repairs, optimizing material usage by reusing functional components. • Demonstrate how to minimize the use of single-use materials and diagnose faults accurately to avoid unnecessary replacements. • Show how to follow organizational sustainability policies and coordinate with certified recyclers for responsible disposal of non-recyclable waste. • Demonstrate how to ensure proper documentation of waste transfer to recycling or disposal agencies. • Show how to participate in training programs on environmental conservation and promote awareness of sustainable practices among team members and stakeholders.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Cleaning Solution (e.g., IPA - Iso Propyl Alcohol), Cleaning Brush, Antistatic Gloves and Mats.	

Module 8: Employability Skills (60 Hours)

Mapped to DGT/VSQ/N0102, v1.0

Duration (in hours): 60:00

Key Learning Outcomes

After completing this programme, participants will be able to:

Introduction to Employability Skills Duration: 1.5 Hours

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship Duration: 1.5 Hours

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century Duration: 2.5 Hours

5. Discuss the importance of relevant 21st-century skills.
6. Exhibit 21st-century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

Basic English Skills Duration: 10 Hours

8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

Career Development & Goal Setting Duration: 2 Hours

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills Duration: 5 Hours

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion Duration: 2.5 Hours

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy Duration: 5 Hours

17. Outline the importance of selecting the right financial institution, product, and service

18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.
20. Discuss the legal rights, laws, and aids

Essential Digital Skills Duration: 10 Hours

21. Describe the role of digital technology in today's life
22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
24. Create sample word documents, excel sheets and presentations using basic features
25. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 7 Hours

26. Explain the types of entrepreneurship and enterprises
27. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
29. Create a sample business plan, for the selected business opportunity

Customer Service Duration: 5 Hours

30. Describe the significance of analyzing different types and needs of customers
31. Explain the significance of identifying customer needs and responding to them in a professional manner.
32. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs Duration: 8 Hours

33. Create a professional Curriculum Vitae (CV)
34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
35. Discuss the significance of maintaining hygiene and confidence during an interview
36. Perform a mock interview
37. List the steps for searching and registering for apprenticeship opportunities

Module 9: On-the-Job Training

Mapped to Handheld Devices (Mobile & Accessories) Technician

Mandatory Duration: 90:00	Recommended Duration: 00:00
Location: On-Site	
Terminal Outcomes • Demonstrate how to analyze, diagnose, and categorize faults in mobile phones. • Show how to prepare for mobile phone repairs, including tool setup and fault assessment. • Demonstrate the steps involved in repairing and testing mobile phones for functionality. • Show how to perform chip-level repairs using micro and SMT soldering and diagnostic tools. • Demonstrate the key post-repair activities to ensure device functionality and quality. • Show how to carry out pre-repair activities for tablets, including diagnostics and component checks. • Demonstrate the process of repairing and testing tablets to restore full functionality. • Show how to perform chip-level repairs in tablets using appropriate tools and techniques. • Demonstrate the key post-repair activities required to maintain quality and compliance. • Show how to identify recyclable, reusable, and disposable components during tablet repairs. • Show how to diagnose faults in Windows and Apple laptops and mobile accessories using diagnostic tools and service manuals. • Demonstrate the steps involved in performing laptop repairs, including hardware and software troubleshooting. • Show how to repair mobile accessories, such as fixing charging circuits, replacing components, and ensuring functionality. • Demonstrate key post-repair activities, including quality checks, documentation, and e-waste disposal. • Demonstrate the correct procedures for adhering to environmental standards in electronic repairs. • Show how to implement sustainable repair practices to minimize waste and energy consumption. • Demonstrate compliance with key sustainability protocols during tablet repairs.	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialisation	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate	Electronics and Communication /Telecom/ Information Technology/ Computer Science and other relevant fields	6	Handset Repairing			

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Handheld Devices (Mobile & Accessories) Technician” mapped to QP: “TEL/Q2201, v5.0”. 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	Electronics and Communication /Telecom/ Information Technology/ Computer Science and other relevant fields	6	Handset Repairing			

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Handheld Devices (Mobile & Accessories) Technician” mapped to QP: “TEL/Q2201, v5.0”. 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
NCVT	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
AI	Artificial Intelligence
SoC	System on Chip
RFFE	Radio Frequency Front-End
SMD	Surface-Mount Device
JTAG	Joint Test Action Group
UART	Universal Asynchronous Receiver-Transmitter
UFS	Universal Flash Storage
UMT	Ultimate Multi Tool
SLAs	Service Level Agreements
ESD	Electrostatic Discharge
BER	Beyond Economic Repair
TAT	Turnaround Time
OCA	Optically Clear Adhesive
RCA	Root Cause Analysis
PDCA	Plan-Do-Check-Act
MOSFETs	Metal-Oxide-Semiconductor Field-Effect Transistors
RAM	Random Access Memory
SSD	Solid State Drive
HDD	Hard Disk Drive
IC	Integrated Circuit
IoT	Internet of Things