# Mobile Phone Hardware Repair Technician

QP Code: ELE/Q8104

Version: 4.0

NSQF Level: 4

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**Qualification Pack**

# Contents

**Qualification Pack**

# ELE/Q8104: Mobile Phone Hardware Repair Technician

## Brief Job Description

The individual at work is responsible for rectifying faults in the mobile phone brought in by the customer. The individual receives the faulty mobile phone, diagnoses the problems, performs front end or hardware level repair as required, resolves software issues and ensures effective functioning before delivering back to customer.

## Personal Attributes

The job requires the individual to have attention to details, patience, ability to listen, steady hands, logical thinking and customer orientation. The individual must work on desk with different types of equipment.

## Applicable National Occupational Standards (NOS)

### Compulsory NOS:

1. ELE/N8107: Repair and rectify the faults in mobile Phone

2. ELE/N8104: Interact with customer and perform front end repair

3. ELE/N8121: Maintain Workplace Safety Reporting and Coordination

4. DGT/VSQ/N0101: Employability Skills (30 Hours)

## Qualification Pack (QP) Parameters

| Sector | Electronics |
|---|---|
| Sub-Sector | Communication and Broadcasting |
| Occupation | After Sales Service |
| Country | India |
| NSQF Level | 4 |
| Credits | 19 |
| Aligned to NCO/ISCO/ISIC Code | NCO-2015/7422.2301 |

| | |
|---|---|
| **Minimum Educational Qualification & Experience** | 12th grade Pass (12th grade or equivalent ) with NA of experience<br>OR<br>10th grade pass (10th grade or equivalent ) with 3 Years of experience Relevant Experience in Electronics Domain<br>OR<br>Previous relevant Qualification of NSQF Level (Certificate-NSQF (Level-3 in relevant domain)) with 3 Years of experience Relevant Experience in Electronics Domain. |
| **Minimum Level of Education for Training in School** | 10th Class |
| **Pre-Requisite License or Training** | NA |
| **Minimum Job Entry Age** | 16 Years |
| **Last Reviewed On** | NA |
| **Next Review Date** | 01/09/2028 |
| **NSQC Approval Date** | 16/12/2025 |
| **Version** | 4.0 |
| **Reference code on NQR** | QG-04-EH-04686-2025-V2-ESSC |
| **NQR Version** | 2 |

**Remarks:**

| |
|---|
| NA |

# ELE/N8107: Repair and rectify the faults in mobile Phone

## Description

This NOS unit is about repairing the faulty module in the hardware and checking for effective functioning. Also, software issues are also checked and rectified.

## Scope

The scope covers the following :

- Introduction and following standard repair procedure
- Assembling and disassembling the mobile phone
- Diagnosing the problem
- Fixing the software
- Repairing the component or module
- Replacing faulty component

## Elements and Performance Criteria

### Introduction and following standard repair procedure

To be competent, the user/individual on the job must be able to:

**PC1.** Identify and describe the common hardware components found in all types of mobile phones (such as battery, display, speaker, microphone, motherboard, charging port, camera, SIM and memory slots), differentiate between various categories of mobile phones (feature phones, smartphones, foldable devices), and recognize frequent hardware faults like no power, charging issues, display damage, audio failure, overheating, and network signal problems.

**PC2.** Follow the standard procedure as documented by the mobile phone brand for each model including foldable and 5G-enabled phones.

**PC3.** Take anti-static precautions before work and wear ESD wrist straps or aprons in an ESD-safe workstation.

**PC4.** Follow standard operating procedure while handling hardware modules such as handling PCB with ESD standards and proper grounding techniques including flexible OLED components.

**PC5.** Use recommended tools for specific operation suggested by the brand including brand-authorized diagnostic tools like Octoplus, Z3X, Miracle Box.

**PC6.** Maintain zero-material defect during material handling by following standard operating procedure and using ESD-safe storage trays especially for sensitive modules like wireless charging coils and USB-C PD boards.

### Assembling and disassembling the mobile phone

To be competent, the user/individual on the job must be able to:

**PC7.** Open the outer panel of the mobile phone using metal/plastic case opening tools without damaging foldable screen or hinge mechanism.

**PC8.** Use the brand recommended screwdrivers to remove the screws to open the inner casing ensuring screw mapping for reassembly.

**PC9.** Locate the connectors and release them to remove the motherboard from the device.

**PC10.** Use hot air gun to remove the LCD screen with foldable and under-display camera considerations

**PC11.** Reassemble using correct tools and sealing techniques [to retain IP rating and hinge flexibility.

*Diagnosing the problem*

To be competent, the user/individual on the job must be able to:

**PC12.** Understand the customer-level complaint and confirm the issue.

**PC13.** Take preventive measures and identify if there are any other issues in the mobile phone.

**PC14.** Use the self-diagnostic tools and automated software tools like Z3X, Octoplus, etc. to test hardware like charging ICs, touch, speaker, RF, and wireless charging coils.

**PC15.** Follow the standard diagnostic procedure as documented by the mobile phone brand for each model.

**PC16.** Check the recently installed application or software and verify the compatibility of the software with the mobile phone

*Fixing the software*

To be competent, the user/individual on the job must be able to:

**PC17.** Check the recently installed application or software and verify the compatibility of the software with the mobile phone.

**PC18.** Uninstall the applications that are not compatible or creating issues in the mobile phone.

**PC19.** Install authorized software using OEM tools e.g., Miracle Box, OEM Flashers

*Repairing the component or module*

To be competent, the user/individual on the job must be able to:

**PC20.** Identify part-level repairability (e.g., charging IC, USB-C PD board, in-screen fingerprint sensor)

**PC21.** Estimate the cost of repair and verify if it is within Beyond Economic Repair (BER).

**PC22.** Use hot air gun at regulated temperature to desolder defective components like wireless charging coils or USB PD controllers.

**PC23.** Clean the board by melting the old solder and removing using flux and solder wick properly.

**PC24.** Place the new component precisely on the board at specified location using tweezers and under magnification if needed.

**PC25.** Solder the component on the PCB using soldering stations.

**PC26.** Ensure the soldering is proper and the component is fixed as per the specification

**PC27.** Operate automated BGA (Ball Grid Array) work station to precisely remove the chip from the board and repair them.

**PC28.** Understand & Perform IC reballing including heating, cleaning, placing solder balls, and chip mounting.

**PC29.** Check for functioning of the hardware after repairing

**PC30.** Ensure that there is no damage of PCB while removal and fixing of SMD components.

**PC31.** Ensure other components are not damaged while using hot air gun for removal of a component which could cause damage.

**PC32.** Ensure adequate soldering for fixing the component and no further rework is required and verify continuity using multimeter

*Replacing faulty component*

To be competent, the user/individual on the job must be able to:

**PC33.** Receive spare module/component from stores or OEM.

**PC34.** Identify and decide on replacing the module or component as the appropriate solution.

**PC35.** Take precautions when handling delicate parts (e.g., foldable screens, under-display cameras, fingerprint sensors)

**PC36.** Ensure that cost of replacing is justified as the repair cost is beyond economic repair (BER).

**PC37.** Ensure that replaced module or component is working and no further rework is required

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** companys policies on: incentives, delivery standards, and personnel management

**KU2.** companys after sales support policy

**KU3.** importance of the individuals role in the workflow

**KU4.** reporting structure

**KU5.** companys policy on products warranty and other terms and conditions

**KU6.** companys line of business and product portfolio

**KU7.** companys repair and stores policy

**KU8.** documentation procedure followed in the company

**KU9.** companys policy on repair time, turnaround time, production targets, working hours

**KU10.** basic electronics involved in the hardware

**KU11.** diagnostic or power on tests of different OEMs

**KU12.** operations of different models of mobile phone

**KU13.** features of mobile phone and their purpose

**KU14.** different types of mobile phone and their model specifications

**KU15.** new product specifications and their spares and repair details

**KU16.** how to document the spares movement note and capture activity performed

**KU17.** software and applications related to mobile phone

**KU18.** assembling and disassembling mobile phone

**KU19.** handling procedure of display systems in mobile phone (LCD and LED)

**KU20.** frequently encountered problems in mobile phone and their repair procedures

**KU21.** terminologies and procedures mentioned in repair manual

**KU22.** softwares and operating system related to mobile phone

**KU23.** applications including games that can be installed in mobile phone and the authentic source to download them

**KU24.** licensed versions of software and application, its terms and conditions associated with it

**KU25.** different types of soldering techniques such as surface mount, through hole

**KU26.** basic electronic repairing and reworking such as desoldering, soldering, removal and fixing components

**KU27.** usage of tools such as electric screwdrivers, multimeter, soldering station, hot air blower, BGA workstation

**KU28.** overview of IPC Standards

**KU29.** critical process handling such as Torque Drivers, Soldering Temperature Maintenance, Light Intensity, Hot Air Blower Temperature Calibrations

**KU30.** problem solving techniques such as PDCA, RCA, 7QC Tools

**KU31.** X-Ray validations for BGA Rework

**KU32.** MSD component handling

**KU33.** BGA rework in detail

**KU34.** RF testing methodologies

**KU35.** estimate cost of repair and verify Beyond Economic Repair (BER) value

**KU36.** service level agreement (SLA) and conditions associated with it

**KU37.** Electrostatic Discharge (ESD), its purpose and precautionary measures to be taken

**KU38.** process system such as 5S

**KU39.** documentation procedure to record customer, mobile phone and repair details

**KU40.** check and test various electronic components on their functionality

**KU41.** quality standards to be followed

**KU42.** implementation process for Engineering Change Order (ECO)

## Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** read the standard operating or repair procedure manual for different equipment

**GS2.** note the process done for diagnose

**GS3.** document the completed work

**GS4.** to share work load as required

**GS5.** to achieve the target

**GS6.** operate computer and laptop

**GS7.** operate the different software related to mobile phone

**GS8.** download software and applications from companys website and from cloud appropriately

**GS9.** to share work load as required

**GS10.** to achieve the target

**GS11.** to improve work processes

**GS12.** to reduce errors and correct themselves with the experienced mistakes operate tools such as manual and electric screw drivers for disassembling and assembling of equipments

**GS13.** use hot air blower/ gun for desoldering

**GS14.** use semi-automated or automated BGA work station

**GS15.** use other specific devices for repairs such as soldering iron, multimeter, POST cards

**GS16.** use metal or plastic ply to open the panel of mobile phone

**GS17.** use antistatic device such as ESD wrist strips

**GS18.** to spot process disruptions and delays

**GS19.** to report on any issues faced to superiors without delay

**GS20.** is there any software error in the mobile phone which can be checked with with USB cable and can be reported / corrected from OS console

**GS21.** whether the mobile phone is beyond repair or use and throw type or repairable

**GS22.** whether it is the LCD plus touch panel or the battery or motherboard which is faulty and can they be replaced

**GS23.** whether the motherboard can be replaced at location other than OEM

**GS24.** are there any hardware issues with camera modules, USB ports and LED light, SOUND devices like speaker mic, antennas for BLE, WiFI, GSM/LTE, NFC, light sensors, proximity sensors, gyro sensors, GPS sensors

## Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| *Introduction and following standard repair procedure* | **7** | **6** | **-** | **-** |
| **PC1.** Identify and describe the common hardware components found in all types of mobile phones (such as battery, display, speaker, microphone, motherboard, charging port, camera, SIM and memory slots), differentiate between various categories of mobile phones (feature phones, smartphones, foldable devices), and recognize frequent hardware faults like no power, charging issues, display damage, audio failure, overheating, and network signal problems. | - | - | - | - |
| **PC2.** Follow the standard procedure as documented by the mobile phone brand for each model including foldable and 5G-enabled phones. | - | - | - | - |
| **PC3.** Take anti-static precautions before work and wear ESD wrist straps or aprons in an ESD-safe workstation. | - | - | - | - |
| **PC4.** Follow standard operating procedure while handling hardware modules such as handling PCB with ESD standards and proper grounding techniques including flexible OLED components. | - | - | - | - |
| **PC5.** Use recommended tools for specific operation suggested by the brand including brand-authorized diagnostic tools like Octoplus, Z3X, Miracle Box. | - | - | - | - |
| **PC6.** Maintain zero-material defect during material handling by following standard operating procedure and using ESD-safe storage trays especially for sensitive modules like wireless charging coils and USB-C PD boards. | - | - | - | - |
| *Assembling and disassembling the mobile phone* | **5** | **10** | **-** | **-** |
| **PC7.** Open the outer panel of the mobile phone using metal/plastic case opening tools without damaging foldable screen or hinge mechanism. | - | - | - | - |
| **PC8.** Use the brand recommended screwdrivers to remove the screws to open the inner casing ensuring screw mapping for reassembly. | - | - | - | - |

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| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| **PC9.** Locate the connectors and release them to remove the motherboard from the device. | - | - | - | - |
| **PC10.** Use hot air gun to remove the LCD screen with foldable and under-display camera considerations | - | - | - | - |
| **PC11.** Reassemble using correct tools and sealing techniques [to retain IP rating and hinge flexibility. | - | - | - | - |
| *Diagnosing the problem* | **5** | **10** | **-** | **-** |
| **PC12.** Understand the customer-level complaint and confirm the issue. | - | - | - | - |
| **PC13.** Take preventive measures and identify if there are any other issues in the mobile phone. | - | - | - | - |
| **PC14.** Use the self-diagnostic tools and automated software tools like Z3X, Octoplus, etc. to test hardware like charging ICs, touch, speaker, RF, and wireless charging coils. | - | - | - | - |
| **PC15.** Follow the standard diagnostic procedure as documented by the mobile phone brand for each model. | - | - | - | - |
| **PC16.** Check the recently installed application or software and verify the compatibility of the software with the mobile phone | - | - | - | - |
| *Fixing the software* | **5** | **6** | **-** | **-** |
| **PC17.** Check the recently installed application or software and verify the compatibility of the software with the mobile phone. | - | - | - | - |
| **PC18.** Uninstall the applications that are not compatible or creating issues in the mobile phone. | - | - | - | - |
| **PC19.** Install authorized software using OEM tools e.g., Miracle Box, OEM Flashers | - | - | - | - |
| *Repairing the component or module* | **13** | **20** | **-** | **-** |
| **PC20.** Identify part-level repairability (e.g., charging IC, USB-C PD board, in-screen fingerprint sensor) | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| **PC21.** Estimate the cost of repair and verify if it is within Beyond Economic Repair (BER). | - | - | - | - |
| **PC22.** Use hot air gun at regulated temperature to desolder defective components like wireless charging coils or USB PD controllers. | - | - | - | - |
| **PC23.** Clean the board by melting the old solder and removing using flux and solder wick properly. | - | - | - | - |
| **PC24.** Place the new component precisely on the board at specified location using tweezers and under magnification if needed. | - | - | - | - |
| **PC25.** Solder the component on the PCB using soldering stations. | - | - | - | - |
| **PC26.** Ensure the soldering is proper and the component is fixed as per the specification | - | - | - | - |
| **PC27.** Operate automated BGA (Ball Grid Array) work station to precisely remove the chip from the board and repair them. | - | - | - | - |
| **PC28.** Understand & Perform IC reballing including heating, cleaning, placing solder balls, and chip mounting. | - | - | - | - |
| **PC29.** Check for functioning of the hardware after repairing | - | - | - | - |
| **PC30.** Ensure that there is no damage of PCB while removal and fixing of SMD components. | - | - | - | - |
| **PC31.** Ensure other components are not damaged while using hot air gun for removal of a component which could cause damage. | - | - | - | - |
| **PC32.** Ensure adequate soldering for fixing the component and no further rework is required and verify continuity using multimeter | - | - | - | - |
| *Replacing faulty component* | **5** | **8** | - | - |
| **PC33.** Receive spare module/component from stores or OEM. | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| **PC34.** Identify and decide on replacing the module or component as the appropriate solution. | - | - | - | - |
| **PC35.** Take precautions when handling delicate parts (e.g., foldable screens, under-display cameras, fingerprint sensors) | - | - | - | - |
| **PC36.** Ensure that cost of replacing is justified as the repair cost is beyond economic repair (BER). | - | - | - | - |
| **PC37.** Ensure that replaced module or component is working and no further rework is required | - | - | - | - |
| **NOS Total** | **40** | **60** | **-** | **-** |

## National Occupational Standards (NOS) Parameters

| | |
|---|---|
| **NOS Code** | ELE/N8107 |
| **NOS Name** | Repair and rectify the faults in mobile Phone |
| **Sector** | Electronics |
| **Sub-Sector** | Communication and Broadcasting |
| **Occupation** | After Sales Service |
| **NSQF Level** | 4 |
| **Credits** | 9.5 |
| **Version** | 3.0 |
| **Last Reviewed Date** | 16/12/2025 |
| **Next Review Date** | 01/09/2028 |
| **NSQC Clearance Date** | 16/12/2025 |

# ELE/N8104: Interact with customer and perform front end repair

## Description

This NOS unit is about interacting with the customers and their customer requirements or problems faced in the mobile phone and performing front end repair where disassembling of hardware is not required

## Scope

The scope covers the following :

- Engaging with Customers
- Understanding the Complaint
- Documenting on Computer
- Performing Front-End Repair

## Elements and Performance Criteria

### Engaging with Customers

To be competent, the user/individual on the job must be able to:

**PC1.** Receive the customers and greet them as per company's norms and follow behavioural etiquettes while interacting with customers.

**PC2.** Ensure the customers are comfortable in the store.

**PC3.** Communicate in the language which the customers are comfortable with.

**PC4.** Understand the profile of the customers and offer service based on their usage pattern and needs.

**PC5.** Inform about repair charges and warranty applicable [in a transparent and customer-friendly manner].

### Understanding the Complaint

To be competent, the user/individual on the job must be able to:

**PC6.** Interact with customers to understand the customer's purpose of visit such as repair of phone, purchase of accessories, software upload, collection of repaired phone.

**PC7.** Listen to customers and understand the customer-level complaint such as display not working, not switching on.

**PC8.** Interrogate the customers to assess the cause of the problem such as physical damage, uploading of any unauthorised software or application.

**PC9.** Decide on the action to be performed, i.e., front end repair or in-depth hardware level repair is required.

**PC10.** Inform customers about the time taken and estimated cost for hardware level repair.

**PC11.** Provide document to customers for collecting the device after repair including unique service ID or job sheet for tracking.

### Documenting on Computer

To be competent, the user/individual on the job must be able to:

**PC12.** Use the system to identify the warranty coverage of the mobile phone and other terms and conditions along with service history if available.

**PC13.** Understand the customer relationship management policy of the mobile brand and inform customers about them including loyalty benefits, AMC, or escalation process if applicable.

**PC14.** Log into customer portal and enter the details of the customer and other details such as phone model, complaints, warranty coverage.

**PC15.** Understand and use the interactive ERP system of the company and enter appropriate details for repair logging, stock tracking, and follow-ups.

**PC16.** Use the system to prepare invoice, stock management, order placement, check availability of spares/accessories, etc.

*Performing Front-End Repair*

To be competent, the user/individual on the job must be able to:

**PC17.** Identify problem and decide the action to be taken based on basic diagnostic checks or accessory faults.

**PC18.** Upload only licensed and brand-approved applications as per customer requirement using system ensuring compliance with data privacy policies.

**PC19.** Understand the application and software compatibility with the mobile phone and suggest to customers accordingly to avoid system performance issues or instability.

**PC20.** Check the accessories and perform a demo with the customer to ensure their functionality (chargers, SD card, etc).

**PC21.** Check the accessories and perform a demo with the customer to ensure their functionality (chargers, SD card, etc).

**PC22.** Open the panel of the mobile phone without damaging them using proper tools and ESD-safe handling techniques.

**PC23.** Ensure the functionality of the replaced part through visual and functional testing.

**PC24.** Provide necessary details on the warranty, terms and conditions of the replaced parts.

**PC25.** Educate customers on effective usage of mobile phone including safe charging practices, app downloads, and maintenance tips.

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** companys policies on: incentives, delivery standards, and personnel management

**KU2.** companys sales and after sales support policy

**KU3.** importance of the individuals role in the workflow

**KU4.** reporting structure

**KU5.** companys policy on products warranty and other terms and conditions

**KU6.** companys line of business and product portfolio

**KU7.** companys service level agreement (SLA) with the brand

**KU8.** basic electronics involved in the hardware

**KU9.** operate various models of moilephone

**KU10.** features of mobile phone and their purpose

**KU11.** different types of mobile phone and their model specifications

**KU12.** how to document the spares movement note and capture all the action performed

**KU13.** different accessories available for mobile phones and their purpose

**KU14.** software and applications related to mobile phone

**KU15.** procedures of replacing accessories such as battery, SD card

**KU16.** software and applications available in the mobile phone market, their usage and purpose

**KU17.** licensed and authorised software compatable for mobile phones and the downloading procedure

**KU18.** specifications of accessories such as chargers, battery

**KU19.** service level agreement with the brand on parameters such as turn around time (TAT), repair procedure, warranty

**KU20.** companys ERP system and operational procedure

**KU21.** safety rules, policies and procedures

**KU22.** quality standards to be followed

## Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** prepare complaints note with customer details, issues faced, phone details

**GS2.** note customer complaints and solution provided

**GS3.** prepare invoice with appropriate details

**GS4.** to share work load as required

**GS5.** to achieve the targets given on service

**GS6.** how to develop a rapport with customers

**GS7.** how to listen carefully and interpret their requirement

**GS8.** how to suggest customer on possible solutions

**GS9.** how to seek inputs from customers at assess the problems

**GS10.** how to put the customer at ease and suggest solutions

**GS11.** how to communicate in local language

**GS12.** how to educate and inform customer about contractual issues such as warranty, cost of service and module or accessories replacement

**GS13.** how to educate on precautions to be taken for effective uage of mobile phone

**GS14.** importance of personal grooming

**GS15.** significance of etiquette such as maintaining the appropriate physical distance with customer during conversation

**GS16.** importance of being patient and courteous with all types of customers

**GS17.** being polite and courteous under all circumstances

**GS18.** how to operate computer and laptop with ease

**GS19.** software and applications related to mobile phone with its features and purpose

**GS20.** how to download software and application from companys website and from cloud

**GS21.** how to download mobile phone related document from internet such as model specification ,repair manual

**Qualification Pack**

## Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| *Engaging with Customers* | **8** | **11** | **-** | **-** |
| **PC1.** Receive the customers and greet them as per company's norms and follow behavioural etiquettes while interacting with customers. | - | - | - | - |
| **PC2.** Ensure the customers are comfortable in the store. | - | - | - | - |
| **PC3.** Communicate in the language which the customers are comfortable with. | - | - | - | - |
| **PC4.** Understand the profile of the customers and offer service based on their usage pattern and needs. | - | - | - | - |
| **PC5.** Inform about repair charges and warranty applicable [in a transparent and customer-friendly manner]. | - | - | - | - |
| *Understanding the Complaint* | **8** | **15** | **-** | **-** |
| **PC6.** Interact with customers to understand the customer's purpose of visit such as repair of phone, purchase of accessories, software upload, collection of repaired phone. | - | - | - | - |
| **PC7.** Listen to customers and understand the customer-level complaint such as display not working, not switching on. | - | - | - | - |
| **PC8.** Interrogate the customers to assess the cause of the problem such as physical damage, uploading of any unauthorised software or application. | - | - | - | - |
| **PC9.** Decide on the action to be performed, i.e., front end repair or in-depth hardware level repair is required. | - | - | - | - |
| **PC10.** Inform customers about the time taken and estimated cost for hardware level repair. | - | - | - | - |
| **PC11.** Provide document to customers for collecting the device after repair including unique service ID or job sheet for tracking. | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| *Documenting on Computer* | **9** | **15** | **-** | **-** |
| **PC12.** Use the system to identify the warranty coverage of the mobile phone and other terms and conditions along with service history if available. | - | - | - | - |
| **PC13.** Understand the customer relationship management policy of the mobile brand and inform customers about them including loyalty benefits, AMC, or escalation process if applicable. | - | - | - | - |
| **PC14.** Log into customer portal and enter the details of the customer and other details such as phone model, complaints, warranty coverage. | - | - | - | - |
| **PC15.** Understand and use the interactive ERP system of the company and enter appropriate details for repair logging, stock tracking, and follow-ups. | - | - | - | - |
| **PC16.** Use the system to prepare invoice, stock management, order placement, check availability of spares/accessories, etc. | - | - | - | - |
| *Performing Front-End Repair* | **15** | **19** | **-** | **-** |
| **PC17.** Identify problem and decide the action to be taken based on basic diagnostic checks or accessory faults. | - | - | - | - |
| **PC18.** Upload only licensed and brand-approved applications as per customer requirement using system ensuring compliance with data privacy policies. | - | - | - | - |
| **PC19.** Understand the application and software compatibility with the mobile phone and suggest to customers accordingly to avoid system performance issues or instability. | - | - | - | - |
| **PC20.** Check the accessories and perform a demo with the customer to ensure their functionality (chargers, SD card, etc). | - | - | - | - |
| **PC21.** Check the accessories and perform a demo with the customer to ensure their functionality (chargers, SD card, etc). | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| **PC22.** Open the panel of the mobile phone without damaging them using proper tools and ESD-safe handling techniques. | - | - | - | - |
| **PC23.** Ensure the functionality of the replaced part through visual and functional testing. | - | - | - | - |
| **PC24.** Provide necessary details on the warranty, terms and conditions of the replaced parts. | - | - | - | - |
| **PC25.** Educate customers on effective usage of mobile phone including safe charging practices, app downloads, and maintenance tips. | - | - | - | - |
| **NOS Total** | **40** | **60** | **-** | **-** |

## Qualification Pack

## National Occupational Standards (NOS) Parameters

| | |
|---|---|
| **NOS Code** | ELE/N8104 |
| **NOS Name** | Interact with customer and perform front end repair |
| **Sector** | Electronics |
| **Sub-Sector** | Communication and Broadcasting |
| **Occupation** | AFTER SALES SERVICE |
| **NSQF Level** | 4 |
| **Credits** | 7 |
| **Version** | 2.0 |
| **Last Reviewed Date** | 16/12/2025 |
| **Next Review Date** | 01/09/2028 |
| **NSQC Clearance Date** | 16/12/2025 |

# ELE/N8121: Maintain Workplace Safety Reporting and Coordination

## Description

This NOS is about to ensure a safe and compliant work environment by following health and safety practices accurately reporting work status and effectively coordinating with team members and superiors to achieve quality and productivity targets.

## Scope

The scope covers the following :

- Quality assurance while Using equipment
- Seeking assistance on unresolved faults
- Reporting and achieving productivity target

## Elements and Performance Criteria

### Quality assurance while Using equipment

To be competent, the user/individual on the job must be able to:

**PC1.** Identify and use appropriate tools and manuals for repairing the specific issue.

**PC2.** Prevent any accidents while handling hazardous tools like heat gun, blades, or sharp openers.

**PC3.** Achieve results using appropriate tools for specific rework activity such as microscope for SMD soldering, tweezers for IC placement.

**PC4.** Maintain zero-material defect during material handling by following standard operating procedure for tools handling.

### Seeking assistance on unresolved faults

To be competent, the user/individual on the job must be able to:

**PC5.** Seek technical assistance from engineer on faults that cannot be fixed or where board damage is suspected.

**PC6.** Receive instruction from engineers on use of specific tools or new repair processes.

**PC7.** Discuss with superior if the cost estimate is found to be Beyond Economic Repair (BER) and take recommended action.

**PC8.** Coordinate with superior for performing quality check on the repaired module

### Reporting and achieving productivity target

To be competent, the user/individual on the job must be able to:

**PC9.** Report on the workload and completion status.

**PC10.** Submit the appropriate documentation on completion of task assigned.

**PC11.** Document the work completed on the company ERP software for tracking and future references

**PC12.** Achieve 100% daily and weekly target of number of repairs as defined by service center or OEM SLAs.

**PC13.** Meet the target of quality as per the Service Level Agreement (SLA) of the brand and avoid rework.

**PC14.** Repair within the turnaround time (TAT) and deliver them with functional check and customer acknowledgement.

**PC15.** Apply health and safety practices by using personal protective equipment (PPE), ensuring a clean and hazard-free workstation, handling tools and electronic components with care, and following electrical and fire safety protocols to prevent workplace injuries and equipment damage.

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** Knowledge of correct tools manuals and equipment required for different repair and rework activities

**KU2.** Understanding of safety precautions while handling hazardous tools and electronic components

**KU3.** Knowledge of standard operating procedures to avoid material damage and defects

**KU4.** Understanding of escalation process for unresolved faults and beyond economic repair cases

**KU5.** Knowledge of quality standards service level agreements and documentation requirements

## Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** Ability to select and use appropriate tools for repair rework and quality assurance tasks

**GS2.** Ability to follow health safety and PPE practices to maintain a safe work environment

**GS3.** Ability to coordinate with engineers and superiors for technical support and quality checks

**GS4.** Ability to document repair work and report status using ERP and prescribed formats

**GS5.** Ability to meet productivity quality and turnaround time targets as defined by OEM or service center SLAs

## Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| *Quality assurance while Using equipment* | **12** | **17** | **-** | **-** |
| **PC1.** Identify and use appropriate tools and manuals for repairing the specific issue. | - | - | - | - |
| **PC2.** Prevent any accidents while handling hazardous tools like heat gun, blades, or sharp openers. | - | - | - | - |
| **PC3.** Achieve results using appropriate tools for specific rework activity such as microscope for SMD soldering, tweezers for IC placement. | - | - | - | - |
| **PC4.** Maintain zero-material defect during material handling by following standard operating procedure for tools handling. | - | - | - | - |
| *Seeking assistance on unresolved faults* | **10** | **17** | **-** | **-** |
| **PC5.** Seek technical assistance from engineer on faults that cannot be fixed or where board damage is suspected. | - | - | - | - |
| **PC6.** Receive instruction from engineers on use of specific tools or new repair processes. | - | - | - | - |
| **PC7.** Discuss with superior if the cost estimate is found to be Beyond Economic Repair (BER) and take recommended action. | - | - | - | - |
| **PC8.** Coordinate with superior for performing quality check on the repaired module | - | - | - | - |
| *Reporting and achieving productivity target* | **18** | **26** | **-** | **-** |
| **PC9.** Report on the workload and completion status. | - | - | - | - |
| **PC10.** Submit the appropriate documentation on completion of task assigned. | - | - | - | - |
| **PC11.** Document the work completed on the company ERP software for tracking and future references | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| **PC12.** Achieve 100% daily and weekly target of number of repairs as defined by service center or OEM SLAs. | - | - | - | - |
| **PC13.** Meet the target of quality as per the Service Level Agreement (SLA) of the brand and avoid rework. | - | - | - | - |
| **PC14.** Repair within the turnaround time (TAT) and deliver them with functional check and customer acknowledgement. | - | - | - | - |
| **PC15.** Apply health and safety practices by using personal protective equipment (PPE), ensuring a clean and hazard-free workstation, handling tools and electronic components with care, and following electrical and fire safety protocols to prevent workplace injuries and equipment damage. | - | - | - | - |
| **NOS Total** | **40** | **60** | **-** | **-** |

## Qualification Pack

### National Occupational Standards (NOS) Parameters

| | |
|---|---|
| **NOS Code** | ELE/N8121 |
| **NOS Name** | Maintain Workplace Safety Reporting and Coordination |
| **Sector** | Electronics |
| **Sub-Sector** | |
| **Occupation** | After Sales Service-C&B |
| **NSQF Level** | 4 |
| **Credits** | 1.5 |
| **Version** | 1.0 |
| **Last Reviewed Date** | 16/12/2025 |
| **Next Review Date** | 01/09/2028 |
| **NSQC Clearance Date** | 16/12/2025 |

# DGT/VSQ/N0101: Employability Skills (30 Hours)

## Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

## Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

## Elements and Performance Criteria

### Introduction to Employability Skills

To be competent, the user/individual on the job must be able to:

**PC1.**   understand the significance of employability skills in meeting the job requirements

### Constitutional values – Citizenship

To be competent, the user/individual on the job must be able to:

**PC2.**   identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

### Becoming a Professional in the 21st Century

To be competent, the user/individual on the job must be able to:

**PC3.**   explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

### Basic English Skills

To be competent, the user/individual on the job must be able to:

**PC4.**   speak with others using some basic English phrases or sentences

### Communication Skills

To be competent, the user/individual on the job must be able to:

**PC5.**   follow good manners while communicating with others

**PC6.**   work with others in a team

*Diversity & Inclusion*

To be competent, the user/individual on the job must be able to:

**PC7.** communicate and behave appropriately with all genders and PwD

**PC8.** report any issues related to sexual harassment

*Financial and Legal Literacy*

To be competent, the user/individual on the job must be able to:

**PC9.** use various financial products and services safely and securely

**PC10.** calculate income, expenses, savings etc.

**PC11.** approach the concerned authorities for any exploitation as per legal rights and laws

*Essential Digital Skills*

To be competent, the user/individual on the job must be able to:

**PC12.** operate digital devices and use its features and applications securely and safely

**PC13.** use internet and social media platforms securely and safely

*Entrepreneurship*

To be competent, the user/individual on the job must be able to:

**PC14.** identify and assess opportunities for potential business

**PC15.** identify sources for arranging money and associated financial and legal challenges

*Customer Service*

To be competent, the user/individual on the job must be able to:

**PC16.** identify different types of customers

**PC17.** identify customer needs and address them appropriately

**PC18.** follow appropriate hygiene and grooming standards

*Getting ready for apprenticeship & Jobs*

To be competent, the user/individual on the job must be able to:

**PC19.** create a basic biodata

**PC20.** search for suitable jobs and apply

**PC21.** identify and register apprenticeship opportunities as per requirement

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** need for employability skills

**KU2.** various constitutional and personal values

**KU3.** different environmentally sustainable practices and their importance

**KU4.** Twenty first (21st) century skills and their importance

**KU5.** how to use basic spoken English language

**KU6.** Do and dont of effective communication

**KU7.** inclusivity and its importance

**KU8.** different types of disabilities and appropriate communication and behaviour towards PwD

**KU9.** different types of financial products and services

**KU10.** how to compute income and expenses

**KU11.** importance of maintaining safety and security in financial transactions

**KU12.** different legal rights and laws

**KU13.** how to operate digital devices and applications safely and securely

**KU14.** ways to identify business opportunities

**KU15.** types of customers and their needs

**KU16.** how to apply for a job and prepare for an interview

**KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

## Generic Skills (GS)

User/individual on the job needs to know how to:

**GS1.** communicate effectively using appropriate language

**GS2.** behave politely and appropriately with all

**GS3.** perform basic calculations

**GS4.** solve problems effectively

**GS5.** be careful and attentive at work

**GS6.** use time effectively

**GS7.** maintain hygiene and sanitisation to avoid infection

## Assessment Criteria

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|:---:|:---:|:---:|:---:|
| *Introduction to Employability Skills* | **1** | **1** | **-** | **-** |
| **PC1.** understand the significance of employability skills in meeting the job requirements | - | - | - | - |
| *Constitutional values – Citizenship* | **1** | **1** | **-** | **-** |
| **PC2.** identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices | - | - | - | - |
| *Becoming a Professional in the 21st Century* | **1** | **3** | **-** | **-** |
| **PC3.** explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc. | - | - | - | - |
| *Basic English Skills* | **2** | **3** | **-** | **-** |
| **PC4.** speak with others using some basic English phrases or sentences | - | - | - | - |
| *Communication Skills* | **1** | **1** | **-** | **-** |
| **PC5.** follow good manners while communicating with others | - | - | - | - |
| **PC6.** work with others in a team | - | - | - | - |
| *Diversity & Inclusion* | **1** | **1** | **-** | **-** |
| **PC7.** communicate and behave appropriately with all genders and PwD | - | - | - | - |
| **PC8.** report any issues related to sexual harassment | - | - | - | - |
| *Financial and Legal Literacy* | **3** | **4** | **-** | **-** |
| **PC9.** use various financial products and services safely and securely | - | - | - | - |

| Assessment Criteria for Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|
| **PC10.** calculate income, expenses, savings etc. | - | - | - | - |
| **PC11.** approach the concerned authorities for any exploitation as per legal rights and laws | - | - | - | - |
| *Essential Digital Skills* | **4** | **6** | **-** | **-** |
| **PC12.** operate digital devices and use its features and applications securely and safely | - | - | - | - |
| **PC13.** use internet and social media platforms securely and safely | - | - | - | - |
| *Entrepreneurship* | **3** | **5** | **-** | **-** |
| **PC14.** identify and assess opportunities for potential business | - | - | - | - |
| **PC15.** identify sources for arranging money and associated financial and legal challenges | - | - | - | - |
| *Customer Service* | **2** | **2** | **-** | **-** |
| **PC16.** identify different types of customers | - | - | - | - |
| **PC17.** identify customer needs and address them appropriately | - | - | - | - |
| **PC18.** follow appropriate hygiene and grooming standards | - | - | - | - |
| *Getting ready for apprenticeship & Jobs* | **1** | **3** | **-** | **-** |
| **PC19.** create a basic biodata | - | - | - | - |
| **PC20.** search for suitable jobs and apply | - | - | - | - |
| **PC21.** identify and register apprenticeship opportunities as per requirement | - | - | - | - |
| **NOS Total** | **20** | **30** | **-** | **-** |

## National Occupational Standards (NOS) Parameters

| | |
|---|---|
| **NOS Code** | DGT/VSQ/N0101 |
| **NOS Name** | Employability Skills (30 Hours) |
| **Sector** | Cross Sectoral |
| **Sub-Sector** | Professional Skills |
| **Occupation** | Employability |
| **NSQF Level** | 2 |
| **Credits** | 1 |
| **Version** | 1.0 |
| **Last Reviewed Date** | 16/12/2025 |
| **Next Review Date** | 01/09/2028 |
| **NSQC Clearance Date** | 16/12/2025 |

## Assessment Guidelines and Assessment Weightage

**Assessment Guidelines**

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each Element/ PC.

2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.

3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.

4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).

5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.

6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.

7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

**Minimum Aggregate Passing % at QP Level : 70**

(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

## Assessment Weightage

Compulsory NOS

| National Occupational Standards | Theory Marks | Practical Marks | Project Marks | Viva Marks | Total Marks | Weightage |
|---|---|---|---|---|---|---|
| ELE/N8107.Repair and rectify the faults in mobile Phone | 40 | 60 | - | - | 100 | 40 |
| ELE/N8104.Interact with customer and perform front end repair | 40 | 60 | - | - | 100 | 30 |
| ELE/N8121.Maintain Workplace Safety Reporting and Coordination | 40 | 60 | - | - | 100 | 20 |
| DGT/VSQ/N0101.Employability Skills (30 Hours) | 20 | 30 | - | - | 50 | 10 |
| **Total** | **140** | **210** | **-** | **-** | **350** | **100** |

## Acronyms

| | |
|---|---|
| **NOS** | National Occupational Standard(s) |
| **NSQF** | National Skills Qualifications Framework |
| **QP** | Qualifications Pack |
| **TVET** | Technical and Vocational Education and Training |
| **RAM** | Random Access Memory |
| **IC** | Integrated Circuit |
| **CPU** | Central Processing Unit |
| **GPS** | Global Positioning System |
| **ESD** | Electro Static Discharge |

## Glossary

| | |
|---|---|
| **Sector** | Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests. |
| **Sub-sector** | Sub-sector is derived from a further breakdown based on the characteristics and interests of its components. |
| **Occupation** | Occupation is a set of job roles, which perform similar/ related set of functions in an industry. |
| **Job role** | Job role defines a unique set of functions that together form a unique employment opportunity in an organisation. |
| **Occupational Standards (OS)** | OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts. |
| **Performance Criteria (PC)** | Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task. |
| **National Occupational Standards (NOS)** | NOS are occupational standards which apply uniquely in the Indian context. |
| **Qualifications Pack (QP)** | QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code. |
| **Unit Code** | Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N' |
| **Unit Title** | Unit title gives a clear overall statement about what the incumbent should be able to do. |
| **Description** | Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for. |
| **Scope** | Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required. |

| | |
|---|---|
| **Knowledge and Understanding (KU)** | Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard. |
| **Organisational Context** | Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility. |
| **Technical Knowledge** | Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities. |
| **Core Skills/ Generic Skills (GS)** | Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles. |
| **Electives** | Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives. |
| **Options** | Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options. |