सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

कौशल गुणवत्ता प्रगति

Qualification Pack

Technician - Hand Held Products

QP Code: MSME/ELE/Q2301

Version: 1.0

NSQF Level: 4

MSME TECHNOLOGY CENTRE ||
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Contents

Qualification Pack

MSME/ELE/Q2301: Technician - Hand Held Products

Brief Job Description

Performs front end or hardware level repair.

Personal Attributes

Performs front end or hardware level repair.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. MSME/ELE/N2305: ON JOB TRAINING
2. MSME/ELE/N2303: ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP
3. MSME/ELE/N2302: ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP
4. MSME/ELE/N2301: STUDY ON BASIC ELECTRICAL/ELECTRO NICS, SAFETY & HAND TOOLS -HHP
5. MSME/ELE/N2304: Employability skills 07

Qualification Pack (QP) Parameters

Sector	Electronics
Sub-Sector	Strategic Electronics
Occupation	Electronics Servicing
Country	India
NSQF Level	4
Credits	17
Aligned to NCO/ISCO/ISIC Code	Smartphones Repair Technician

Minimum Educational Qualification & Experience	12th grade Pass with NA of experience OR Completed 2nd year of the 3-year diploma after 10 with NA of experience OR Pursuing 2nd year of 3-year regular Diploma (after 10th) with NA of experience OR Previous relevant Qualification of NSQF Level (NSQF Level 3.) with 3 Years of experience OR Previous relevant Qualification of NSQF Level (NSQF Level 3.5) with 1.5 years of experience
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	17 Years
Last Reviewed On	NA
Next Review Date	30/04/2027
NSQC Approval Date	30/04/2024
Version	1.0
Reference code on NQR	NCVET- QG-04-EH-02384-2024-V1-MSME
NQR Version	1.0

MSME/ELE/N2305: ON JOB TRAINING

Description

After completion of course Student should be able to Understand about how to work with Team.

Scope

The scope covers the following :

- After completion of course Student should be able to Understand about how to work with Team.

Elements and Performance Criteria

MSME/HHP/03 OJT

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

PC1. • On job training (OJT)- Product Repair related to Hand Held Products for example, mobile,
• tablet etc. Demonstration servicing Repairing Troubleshooting

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/HHP/03 OJT	-	-	-	100
PC1. • On job training (OJT)- Product Repair related to Hand Held Products for example, mobile, • tablet etc. Demonstration servicing Repairing Troubleshooting	-	-	-	-
NOS Total	-	-	-	100

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N2305
NOS Name	ON JOB TRAINING
Sector	Electronics
Sub-Sector	
Occupation	Electronics Servicing
NSQF Level	4
Credits	7
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

Qualification Pack

MSME/ELE/N2303: ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP

Description

After completion of course Student should be able to Understand about GSM and CDMA and TDMA and FDMA

Scope

The scope covers the following :

- After completion of course Student should be able to Understand about GSM and CDMA and TDMA and FDMA

Elements and Performance Criteria

MSME/HHP/02 ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP

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

PC1. • Basic technology- Introduction of basic electronics. About Electricity, Electronics.
• What is ohm's law, what is voltage, current, resistance? Series circuit and parallel circuit.
• Identifying electronics components and circuit symbols Resistor, Variable
• Resistor(Rheostat), Variable Register (Potentiometer), Trimmer Capacitor Polarized
• Capacitor, LED (Light Emitting Diode), Photodiode, Transistor NPN, Transistor PNP,
• Phototransistor, Microphone, Earphone, Loudspeaker, Pezos Transducer, Amplifier,

PC2. • Overview of technologies- Learn about Network Technologies. Description of
• FDMA (frequency division multiple access), TDMA (time division multiple access), CDMA
• (code division multiple access), GSM (global system for mobile communication). Learn
• about Technology evolution. G (first generation), 2G (second generation), 3G (third
• generation), 4G (fourth generation). Description of GSM Overview. Service provided by GSM. Description of GSM Architecture. Mobile Station (MS), Base Station Subsystem
• (B

PC3. • safety and precautions- Electrostatic Discharge. Definitions of Electro Static
• Discharge (ESD), Electro Static Discharge Sensitive (ESDS), Electrostatic protected Area
• (EPA)What is Electrostatic Discharge (ESD), Charge is generated all the time, How to
• observe ESD, Damage Criteria, ESD comparison with germs, Electrostatic Protected Area
• (EPA) Setup, Methods of ESD Protection, Methods of Handling Printed Board Assembly
• (PBA), ESD Labels

PC4. • Basic Tools Identification & Function- Learn about Soldering Iron, Soldering
• Station, PBA (Printed Board Assembly) Holder, Solder Wire, Thinner or PBA(Printed Board
• Assembly) Cleaner, Liquid Flux, Precision Screwdriver, Tweezers, Brush, Hot Air Blower,
• Magnifying Lamp, Mobile Opener, DC Power Supply, Disorder Wick, Cleaning Sponge,
• Multimeter ESD Tools & Equipment. Wrist Strap, Antistatic Hand Gloves, Antistatic Apron,
• Anti-Static Bin, Antistatic Slipper, Antistatic Bag, Antistatic Mat. Basics o

PC5. • Product Overview- Introduction to Nomenclature What is Nomenclature,
• Samsung HHP Nomenclature, Product Serial Number Nomenclature, and Software
• Version Nomenclature?

PC6. • Types of Mobile Phone & its Features- About Mobile Phone & Features.
• Introduction to the Mobile Phone, Block Diagram of mobile phone. Introduction to the
• Basic Mobile Phone. Introduction To Dual SIM Mobile Phone. Introduction To FeatureMobile Phone. Introduction To Smart Mobile Phone. Introduction To Mobile Phone
• Sensors. What is Sensor, About Grip Sensor, Barometer Sensor, Accelerometer Sensor,
• Gyro Sensor, Magnetic Sensor, Proximity Sensor and Ambient Light Sensor (ALS)

PC7. • Assembly & Disassembly Process- Disassembly Process. Basic Process of
• Disassembly, Required tools, How to open or disassemble a mobile cell phone. Assembly
• Process. How to assemble a mobile cell phone.

PC8. • Soldering and disordering process- Soldering Technique. Tools required for
• soldering. Important Soldering Tips. Cleanliness, Tinning, Temperature, Duration,
• Adequate solder coverage, Handling. Soldering Precautions. Soldering Process. How to
• Solder Through-Hole Components. How to Solder Surface-Mount Components.
• Disordering Process. How to remove component efficiently, Tips for removing
• components, IFC Soldering Process

PC9. • TAbout Software & IMEI Writing- Software & IMEI. Issues due to Software and IMEI
• Writing

PC10. • Troubleshooting A- Basic Inspection /Hardware/Software Handling Procedures.
• Physical Inspection. Warranty Void. Test using codes. Basic Inspection
• /Hardware/Software Handling Procedures. How To Solve faults related to Ringer,
• Vibrator, Microphone, and Does Not Switch ON, Keypad, Touch and Display. Guides on
• Sleep Current test for Low battery, No Power or Auto Off, Rooting, Safe Mode, RAM
• status, Internet Memory, Power Saving Mode, Flow Chart for Troubleshooting.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/HHP/02 ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP	-	**100**	-	-
PC1. • Basic technology- Introduction of basic electronics. About Electricity, Electronics. • What is ohm's law, what is voltage, current, resistance? Series circuit and parallel circuit. • Identifying electronics components and circuit symbols Resistor, Variable • Resistor(Rheostat), Variable Register (Potentiometer), Trimmer Capacitor Polarized • Capacitor, LED (Light Emitting Diode), Photodiode, Transistor NPN, Transistor PNP, • Phototransistor, Microphone, Earphone, Loudspeaker, Pezos Transducer, Amplifier,	-	-	-	-
PC2. • Overview of technologies- Learn about Network Technologies. Description of • FDMA (frequency division multiple access), TDMA (time division multiple access), CDMA • (code division multiple access), GSM (global system for mobile communication). Learn • about Technology evolution. G (first generation), 2G (second generation), 3G (third • generation), 4G (fourth generation). Description of GSM Overview. Service provided by GSM. Description of GSM Architecture. Mobile Station (MS), Base Station Subsystem • (B	-	-	-	-
PC3. • safety and precautions- Electrostatic Discharge. Definitions of Electro Static • Discharge (ESD), Electro Static Discharge Sensitive (ESDS), Electrostatic protected Area • (EPA)What is Electrostatic Discharge (ESD), Charge is generated all the time, How to • observe ESD, Damage Criteria, ESD comparison with germs, Electrostatic Protected Area • (EPA) Setup, Methods of ESD Protection, Methods of Handling Printed Board Assembly • (PBA), ESD Labels	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC4. • Basic Tools Identification & Function- Learn about Soldering Iron, Soldering • Station, PBA (Printed Board Assembly) Holder, Solder Wire, Thinner or PBA(Printed Board • Assembly) Cleaner, Liquid Flux, Precision Screwdriver, Tweezers, Brush, Hot Air Blower, • Magnifying Lamp, Mobile Opener, DC Power Supply, Disorder Wick, Cleaning Sponge, • Multimeter ESD Tools & Equipment. Wrist Strap, Antistatic Hand Gloves, Antistatic Apron, • Anti-Static Bin, Antistatic Slipper, Antistatic Bag, Antistatic Mat. Basics o	-	-	-	-
PC5. • Product Overview- Introduction to Nomenclature What is Nomenclature, • Samsung HHP Nomenclature, Product Serial Number Nomenclature, and Software • Version Nomenclature?	-	-	-	-
PC6. • Types of Mobile Phone & its Features- About Mobile Phone & Features. • Introduction to the Mobile Phone, Block Diagram of mobile phone. Introduction to the • Basic Mobile Phone. Introduction To Dual SIM Mobile Phone. Introduction To FeatureMobile Phone. Introduction To Smart Mobile Phone. Introduction To Mobile Phone • Sensors. What is Sensor, About Grip Sensor, Barometer Sensor, Accelerometer Sensor, • Gyro Sensor, Magnetic Sensor, Proximity Sensor and Ambient Light Sensor (ALS)	-	-	-	-
PC7. • Assembly & Disassembly Process- Disassembly Process. Basic Process of • Disassembly, Required tools, How to open or disassemble a mobile cell phone. Assembly • Process. How to assemble a mobile cell phone.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC8. • Soldering and disordering process- Soldering Technique. Tools required for • soldering. Important Soldering Tips. Cleanliness, Tinning, Temperature, Duration, • Adequate solder coverage, Handling. Soldering Precautions. Soldering Process. How to • Solder Through-Hole Components. How to Solder Surface-Mount Components. • Disordering Process. How to remove component efficiently, Tips for removing • components, IFC Soldering Process	-	-	-	-
PC9. • TAbout Software & IMEI Writing- Software & IMEI. Issues due to Software and IMEI • Writing	-	-	-	-
PC10. • Troubleshooting A- Basic Inspection /Hardware/Software Handling Procedures. • Physical Inspection. Warranty Void. Test using codes. Basic Inspection • /Hardware/Software Handling Procedures. How To Solve faults related to Ringer, • Vibrator, Microphone, and Does Not Switch ON, Keypad, Touch and Display. Guides on • Sleep Current test for Low battery, No Power or Auto Off, Rooting, Safe Mode, RAM • status, Internet Memory, Power Saving Mode, Flow Chart for Troubleshooting.	-	-	-	-
NOS Total	**-**	**100**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N2303
NOS Name	ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP
Sector	Electronics
Sub-Sector	
Occupation	Electronics Servicing
NSQF Level	4
Credits	4
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

MSME/ELE/N2302: ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP

Description

After completion of course Student should be able to Understand about GSM and CDMA and TDMA and FDMA

Scope

The scope covers the following :

- After completion of course Student should be able to Understand about GSM and CDMA and TDMA and FDMA

Elements and Performance Criteria

MSME/HHP/02 ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP

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

PC1.
- Basic technology- Introduction of basic electronics. About Electricity, Electronics.
- What is ohm’s law, what is voltage, current, resistance? Series circuit and parallel circuit.
- Identifying electronics components and circuit symbols Resistor, Variable
- Resistor(Rheostat), Variable Register (Potentiometer), Trimmer Capacitor Polarized
- Capacitor, LED (Light Emitting Diode), Photodiode, Transistor NPN, Transistor PNP,
- Phototransistor, Microphone, Earphone, Loudspeaker, Pezos Transducer, Amplifier,

PC2.
- Overview of technologies- Learn about Network Technologies. Description of
- FDMA (frequency division multiple access), TDMA (time division multiple access), CDMA
- (code division multiple access), GSM (global system for mobile communication). Learn
- about Technology evolution. G (first generation), 2G (second generation), 3G (third
- generation), 4G (fourth generation). Description of GSM Overview. Service provided by GSM. Description of GSM Architecture. Mobile Station (MS), Base Station Subsystem
- (B

PC3.
- safety and precautions- Electrostatic Discharge. Definitions of Electro Static
- Discharge (ESD), Electro Static Discharge Sensitive (ESDS), Electrostatic protected Area
- (EPA)What is Electrostatic Discharge (ESD), Charge is generated all the time, How to
- observe ESD, Damage Criteria, ESD comparison with germs, Electrostatic Protected Area
- (EPA) Setup, Methods of ESD Protection, Methods of Handling Printed Board Assembly
- (PBA), ESD Labels

PC4.
- Basic Tools Identification & Function- Learn about Soldering Iron, Soldering
- Station, PBA (Printed Board Assembly) Holder, Solder Wire, Thinner or PBA(Printed Board
- Assembly) Cleaner, Liquid Flux, Precision Screwdriver, Tweezers, Brush, Hot Air Blower,
- Magnifying Lamp, Mobile Opener, DC Power Supply, Disorder Wick, Cleaning Sponge,
- Multimeter ESD Tools & Equipment. Wrist Strap, Antistatic Hand Gloves, Antistatic Apron,
- Anti-Static Bin, Antistatic Slipper, Antistatic Bag, Antistatic Mat. Basics o

PC5. • Product Overview- Introduction to Nomenclature What is Nomenclature,
• Samsung HHP Nomenclature, Product Serial Number Nomenclature, and Software
• Version Nomenclature?

PC6. • Types of Mobile Phone & its Features- About Mobile Phone & Features.
• Introduction to the Mobile Phone, Block Diagram of mobile phone. Introduction to the
• Basic Mobile Phone. Introduction To Dual SIM Mobile Phone. Introduction To FeatureMobile Phone. Introduction To Smart Mobile Phone. Introduction To Mobile Phone
• Sensors. What is Sensor, About Grip Sensor, Barometer Sensor, Accelerometer Sensor,
• Gyro Sensor, Magnetic Sensor, Proximity Sensor and Ambient Light Sensor (ALS)

PC7. • Assembly & Disassembly Process- Disassembly Process. Basic Process of
• Disassembly, Required tools, How to open or disassemble a mobile cell phone. Assembly
• Process. How to assemble a mobile cell phone.

PC8. • Soldering and disordering process- Soldering Technique. Tools required for
• soldering. Important Soldering Tips. Cleanliness, Tinning, Temperature, Duration,
• Adequate solder coverage, Handling. Soldering Precautions. Soldering Process. How to
• Solder Through-Hole Components. How to Solder Surface-Mount Components.
• Disordering Process. How to remove component efficiently, Tips for removing
• components, IFC Soldering Process

PC9. • TAbout Software & IMEI Writing- Software & IMEI. Issues due to Software and IMEI
• Writing

PC10. • Troubleshooting A- Basic Inspection /Hardware/Software Handling Procedures.
• Physical Inspection. Warranty Void. Test using codes. Basic Inspection
• /Hardware/Software Handling Procedures. How To Solve faults related to Ringer,
• Vibrator, Microphone, and Does Not Switch ON, Keypad, Touch and Display. Guides on
• Sleep Current test for Low battery, No Power or Auto Off, Rooting, Safe Mode, RAM
• status, Internet Memory, Power Saving Mode, Flow Chart for Troubleshooting.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/HHP/02 ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP	**100**	**-**	**-**	**-**
PC1. • Basic technology- Introduction of basic electronics. About Electricity, Electronics. • What is ohm's law, what is voltage, current, resistance? Series circuit and parallel circuit. • Identifying electronics components and circuit symbols Resistor, Variable • Resistor(Rheostat), Variable Register (Potentiometer), Trimmer Capacitor Polarized • Capacitor, LED (Light Emitting Diode), Photodiode, Transistor NPN, Transistor PNP, • Phototransistor, Microphone, Earphone, Loudspeaker, Pezos Transducer, Amplifier,	-	-	-	-
PC2. • Overview of technologies- Learn about Network Technologies. Description of • FDMA (frequency division multiple access), TDMA (time division multiple access), CDMA • (code division multiple access), GSM (global system for mobile communication). Learn • about Technology evolution. G (first generation), 2G (second generation), 3G (third • generation), 4G (fourth generation). Description of GSM Overview. Service provided by GSM. Description of GSM Architecture. Mobile Station (MS), Base Station Subsystem • (B	-	-	-	-
PC3. • safety and precautions- Electrostatic Discharge. Definitions of Electro Static • Discharge (ESD), Electro Static Discharge Sensitive (ESDS), Electrostatic protected Area • (EPA)What is Electrostatic Discharge (ESD), Charge is generated all the time, How to • observe ESD, Damage Criteria, ESD comparison with germs, Electrostatic Protected Area • (EPA) Setup, Methods of ESD Protection, Methods of Handling Printed Board Assembly • (PBA), ESD Labels	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC4. • Basic Tools Identification & Function- Learn about Soldering Iron, Soldering • Station, PBA (Printed Board Assembly) Holder, Solder Wire, Thinner or PBA(Printed Board • Assembly) Cleaner, Liquid Flux, Precision Screwdriver, Tweezers, Brush, Hot Air Blower, • Magnifying Lamp, Mobile Opener, DC Power Supply, Disorder Wick, Cleaning Sponge, • Multimeter ESD Tools & Equipment. Wrist Strap, Antistatic Hand Gloves, Antistatic Apron, • Anti-Static Bin, Antistatic Slipper, Antistatic Bag, Antistatic Mat. Basics o	-	-	-	-
PC5. • Product Overview- Introduction to Nomenclature What is Nomenclature, • Samsung HHP Nomenclature, Product Serial Number Nomenclature, and Software • Version Nomenclature?	-	-	-	-
PC6. • Types of Mobile Phone & its Features- About Mobile Phone & Features. • Introduction to the Mobile Phone, Block Diagram of mobile phone. Introduction to the • Basic Mobile Phone. Introduction To Dual SIM Mobile Phone. Introduction To FeatureMobile Phone. Introduction To Smart Mobile Phone. Introduction To Mobile Phone • Sensors. What is Sensor, About Grip Sensor, Barometer Sensor, Accelerometer Sensor, • Gyro Sensor, Magnetic Sensor, Proximity Sensor and Ambient Light Sensor (ALS)	-	-	-	-
PC7. • Assembly & Disassembly Process- Disassembly Process. Basic Process of • Disassembly, Required tools, How to open or disassemble a mobile cell phone. Assembly • Process. How to assemble a mobile cell phone.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC8. • Soldering and disordering process- Soldering Technique. Tools required for • soldering. Important Soldering Tips. Cleanliness, Tinning, Temperature, Duration, • Adequate solder coverage, Handling. Soldering Precautions. Soldering Process. How to • Solder Through-Hole Components. How to Solder Surface-Mount Components. • Disordering Process. How to remove component efficiently, Tips for removing • components, IFC Soldering Process	-	-	-	-
PC9. • TAbout Software & IMEI Writing- Software & IMEI. Issues due to Software and IMEI • Writing	-	-	-	-
PC10. • Troubleshooting A- Basic Inspection /Hardware/Software Handling Procedures. • Physical Inspection. Warranty Void. Test using codes. Basic Inspection • /Hardware/Software Handling Procedures. How To Solve faults related to Ringer, • Vibrator, Microphone, and Does Not Switch ON, Keypad, Touch and Display. Guides on • Sleep Current test for Low battery, No Power or Auto Off, Rooting, Safe Mode, RAM • status, Internet Memory, Power Saving Mode, Flow Chart for Troubleshooting.	-	-	-	-
NOS Total	**100**	**-**	**-**	**-**

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N2302
NOS Name	ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP
Sector	Electronics
Sub-Sector	
Occupation	Electronics Servicing
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

MSME/ELE/N2301: STUDY ON BASIC ELECTRICAL/ELECTRO NICS, SAFETY & HAND TOOLS -HHP

Description

After completion of course Student should be able to Get knowledge about Safety and Safety Precautions.

Scope

The scope covers the following :

- After completion of course Student should be able to Get knowledge about Safety and Safety Precautions.

Elements and Performance Criteria

MSME/HHP/01 STUDY ON BASIC ELECTRICAL/ELECTRONI CS, SAFETY & HAND TOOLS -HHP

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

PC1. • Safety- Basic knowledge about safety General safety precautions. Accidents Fire and Fire
• Accidents First Aid. Personal Protective Equipment (PPE) Selecting and using PPE.
• Maintenance of PPE. Monitor and review. Types of PPE. Emergency equipment. Basic hand
• tools Types of Screwdrivers Pliers, Tweezers, Steel Rule, and Scriber.

PC2. • Electronics Fundamentals- What is Matter, molecules, atom. Brief knowledge about
• Voltage and current. Various types of Voltage and current device. Checking Process of
• Resistor, capacitor Basic units Basic of computer and its use.

PC3. • Basic electronics- Process of Inductors. Describe Conductor, insulator, wire. Describe the
• types of Power supplies. 20 Process of Soldering, disordering equipment's.

PC4. • Semiconductor- Semiconductor physics. Semiconductor diodes. Filters. Special purpose
• diodes Power supply.

PC5. • Transistor and its application- Types of transistor. BJT. FET. Identify transistor terminals.
• Applications of transistor.

PC6. • Basic technology- What is ohm's law, what is voltage, current, resistance? Series circuit
• and parallel circuit. Resistor, Variable Resistor(Rheostat), Trimmer Capacitor Polarized
• Capacitor, LED (Light Emitting Diode), Photodiode, Transistor NPN, Transistor PNP.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/HHP/01 STUDY ON BASIC ELECTRICAL/ELECTRONI CS, SAFETY & HAND TOOLS -HHP	**100**	**-**	**-**	**-**
PC1. • Safety- Basic knowledge about safety General safety precautions. Accidents Fire and Fire • Accidents First Aid. Personal Protective Equipment (PPE) Selecting and using PPE. • Maintenance of PPE. Monitor and review. Types of PPE. Emergency equipment. Basic hand • tools Types of Screwdrivers Pliers, Tweezers, Steel Rule, and Scriber.	-	-	-	-
PC2. • Electronics Fundamentals- What is Matter, molecules, atom. Brief knowledge about • Voltage and current. Various types of Voltage and current device. Checking Process of • Resistor, capacitor Basic units Basic of computer and its use.	-	-	-	-
PC3. • Basic electronics- Process of Inductors. Describe Conductor, insulator, wire. Describe the • types of Power supplies. 20 Process of Soldering, disordering equipment's.	-	-	-	-
PC4. • Semiconductor- Semiconductor physics. Semiconductor diodes. Filters. Special purpose • diodes Power supply.	-	-	-	-
PC5. • Transistor and its application- Types of transistor. BJT. FET. Identify transistor terminals. • Applications of transistor.	-	-	-	-
PC6. • Basic technology- What is ohm's law, what is voltage, current, resistance? Series circuit • and parallel circuit. Resistor, Variable Resistor(Rheostat), Trimmer Capacitor Polarized • Capacitor, LED (Light Emitting Diode), Photodiode, Transistor NPN, Transistor PNP.	-	-	-	-
NOS Total	**100**	**-**	**-**	**-**

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N2301
NOS Name	STUDY ON BASIC ELECTRICAL/ELECTRO NICS, SAFETY & HAND TOOLS - HHP
Sector	Electronics
Sub-Sector	
Occupation	Electronics Servicing
NSQF Level	4
Credits	4
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

MSME/ELE/N2304: Employability skills 07

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 getting ready for jobs and apprenticeship

Scope

The scope covers the following :

- 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 getting ready for jobs and apprenticeship

Elements and Performance Criteria

MSME/ES/01 Employability skills

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

PC1. Explain the major applications of MS Office
PC2. Explain the different types of e-commerce
PC3. List the benefits of e-commerce for retailers and customers
PC4. Discuss how the Digital India campaign will help boost e-commerce in India
PC5. Write applications pertaining to various matters
PC6. Explain power of positive attitude and Importance of commitment
PC7. Explain motivation and the Ways to motivate oneself and Personal goal setting
PC8. Explain the Effective & Level of Communication
PC9. Explain communication and Significance of technical communication?
PC10. Explain the methods of listening Skills.
PC11. Explain the differences between bio-data, CV and Resume.
PC12. Explain verbal and non-verbal Communication
PC13. Explain how to face an interview.
PC14. Explain team work, group work, team formation process
PC15. How to Minimize the team conflicts
PC16. Explain Ethics & values
PC17. Explain the concept of entrepreneurship, and entrepreneurship v/s Management
PC18. Explain the process of project report preparation for setting up a new business
PC19. • Explain the role of various schemes and institute for self- employment i.e MSME,
• DIC, NSIC, SIDBI etc,
PC20. Role of financial institution to support startup

PC21. Discuss the importance of saving money
PC22. Discuss the main types of bank accounts
PC23. Differentiate between fixed and variable cost
PC24. Describe the different types of insurance products
PC25. Discuss the main types of electronic funds transfers

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
MSME/ES/01 Employability skills	**100**	**-**	**-**	**-**
PC1. Explain the major applications of MS Office	-	-	-	-
PC2. Explain the different types of e-commerce	-	-	-	-
PC3. List the benefits of e-commerce for retailers and customers	-	-	-	-
PC4. Discuss how the Digital India campaign will help boost e-commerce in India	-	-	-	-
PC5. Write applications pertaining to various matters	-	-	-	-
PC6. Explain power of positive attitude and Importance of commitment	-	-	-	-
PC7. Explain motivation and the Ways to motivate oneself and Personal goal setting	-	-	-	-
PC8. Explain the Effective & Level of Communication	-	-	-	-
PC9. Explain communication and Significance of technical communication?	-	-	-	-
PC10. Explain the methods of listening Skills.	-	-	-	-
PC11. Explain the differences between bio-data, CV and Resume.	-	-	-	-
PC12. Explain verbal and non-verbal Communication	-	-	-	-
PC13. Explain how to face an interview.	-	-	-	-
PC14. Explain team work, group work, team formation process	-	-	-	-
PC15. How to Minimize the team conflicts	-	-	-	-
PC16. Explain Ethics & values	-	-	-	-
PC17. Explain the concept of entrepreneurship, and entrepreneurship v/s Management	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC18. Explain the process of project report preparation for setting up a new business	-	-	-	-
PC19. • Explain the role of various schemes and institute for self- employment i.e MSME, • DIC, NSIC, SIDBI etc,	-	-	-	-
PC20. Role of financial institution to support startup	-	-	-	-
PC21. Discuss the importance of saving money	-	-	-	-
PC22. Discuss the main types of bank accounts	-	-	-	-
PC23. Differentiate between fixed and variable cost	-	-	-	-
PC24. Describe the different types of insurance products	-	-	-	-
PC25. Discuss the main types of electronic funds transfers	-	-	-	-
NOS Total	**100**	**-**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N2304
NOS Name	Employability skills 07
Sector	Electronics
Sub-Sector	
Occupation	Electronics Servicing
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	30/04/2024
Next Review Date	30/04/2027
NSQC Clearance Date	30/04/2024

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

As per QP

Minimum Aggregate Passing % at QP Level : 40

(**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

Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
MSME/ELE/N2305.ON JOB TRAINING	-	-	-	100	100	20
MSME/ELE/N2303.ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP	-	100	-	-	100	20
MSME/ELE/N2302.ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY ,DISASSEMBLY & SET UP ON RESPECTIVE PRODUCTS -HHP	100	-	-	-	100	20
MSME/ELE/N2301.STUDY ON BASIC ELECTRICAL/ELECTRO NICS, SAFETY & HAND TOOLS - HHP	100	-	-	-	100	20
MSME/ELE/N2304.Employability skills 07	100	-	-	-	100	20
Total	**300**	**100**	**-**	**100**	**500**	**100**

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training

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.