



Qualification Pack

Technician - Audio Video Systems

QP Code: MSME/ELE/Q2101

Version: 1.0

NSQF Level: 4

MSME TECHNOLOGY CENTRE ||
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Qualification Pack

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Qualification Pack

MSME/ELE/Q2101: Technician - Audio Video Systems

Brief Job Description

After attaining this qualification learner will be able to Installation, repairing & servicing of CRT TV, LCD TV, LEDTV, PLASMA TV, SMART TV, DVD PLAYER and HOME AUDIO

Personal Attributes

After attaining this qualification learner will be able to Installation, repairing & servicing of CRT TV, LCD TV, LEDTV, PLASMA TV, SMART TV, DVD PLAYER and HOME AUDIO

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [MSME/ELE/N2105: ON JOB TRAINING](#)
2. [MSME/ELE/N2103: ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV](#)
3. [MSME/ELE/N2102: ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV](#)
4. [MSME/ELE/N2101: MSME/AV/01 STUDY ON BASIC ELECTRICAL /ELECTRON ICS, SAFETY & HAND TOOLS -AV](#)
5. [MSME/ELE/N2104: Employability skills 08](#)

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	(Television Repair Technician)



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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 10th grade pass (10th grade pass with two years of any combination of NTC/NAC/CITS or equivalent) with NA of experience OR Previous relevant Qualification of NSQF Level (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-02383-2024-V1-MSME
NQR Version	1.0



Qualification Pack

MSME/ELE/N2105: 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/AV/03 OJT

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

PC1. On job training (OJT)- Installation Demonstration servicing Repairing Troubleshooting



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/AV/03 OJT</i>	-	-	-	100
PC1. On job training (OJT)- Installation Demonstration servicing Repairing Troubleshooting	-	-	-	-
NOS Total	-	-	-	100



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N2105
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
NSQF Clearance Date	30/04/2024



Qualification Pack

MSME/ELE/N2103: ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV

Description

After completion of course Student should be able to Understand about Different types of TV, DVD Player and Home Theatre.

Scope

The scope covers the following :

- After completion of course Student should be able to Understand about Different types of TV, DVD Player and Home Theatre.

Elements and Performance Criteria

MSME/AV/02 ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV

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

- PC1.**
- Basic- Introduction of basic electronics. About Electricity, Electronics. What is ohm's law, what is voltage, current, resistance? Series circuit and parallel circuit. Audio Video Standard Tools Kit: Repair &
 - installation. About Multimeter, Rotary selector switch, Sliding switch, Probes, Display, COM Plug, VΩ
 - Plug, A Plug, DC Volt Range, DC Current Range, AC Volt Range, AC Current Range, Ohm Range,
 - Frequency Range, Logic Range, Diode Range, Continuity. Measuring AC Volt, DC Volt, DC Current, AC
- PC2.**
- Safety and Precautions- Electrostatic Discharge Definitions of Electrostatic Discharge (ESD),
 - Electrostatic Discharge Sensitive (ESDS), Electrostatic protected Area (EPA) What is Electrostatic
 - Discharge (ESD), Charge is generated all the time, Electrostatic Charge generation, Damage Criteria,
 - ESD comparison with germ Electrostatic Protected Area (EPA) Setup Methods of ESD Protection,
 - Methods of Handling Printed Board Assembly (PBA)
- PC3.**
- Soldering and Disordering- Basics of Soldering. What is Soldering, Soldering Tools, Disordering Tools,
 - and Soldering Methods Soldering Practice. Soldering Iron Usage Tips & Maintenance, Possible
 - Soldering Defects.
- PC4.**
- Types of TV's- Basic overview. Types of TV's, Basic terms & technology related to TV.



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- PC5.**
- CRT TV- Technology Overview. What is Cathode Ray Tube, Advantages and Disadvantages, Colour
 - Transmission System, Health Concerns.
- PC6.**
- LCD TV- Technology Overview. What is LCD, History of LCD TV, Working Principle of LCD, What is CCFL,
 - Features (CCFL), Advantages of LCD, Disadvantages of LCD, Key features of LCD TV, Wiring Layout of
 - LCD TV, and Major components. Disassembly Process Assembling disassembling Process, Identification
 - of parts.
- PC7.**
- LED TV- Technology Overview. What is LED, LED Backlighting, Features of LED backlit LCD TVs, How LED
 - technology is used in LCD TVs, Full -Array vs. Edge Lit, Energy Consumption, How LED TV works .
 - Disassembly Process . Assembling disassembling Process, Identification of parts
- PC8.**
- PLASMA TV- Technology Overview Basic Theory of Plasma, History of Plasma Display, Basic concept of
 - Plasma, What is plasma, Inside a Plasma Display, How Plasma Displays Work, Advantages of Plasma T
 - V, Disadvantages of Plasma TV. Disassembly Process . Assembling disassembling Process, Identification
 - of parts .
- PC9.**
- Smart TV- Joy Series & Curved TV: Installation& features. TV Model Nomenclature, installation process
 - of Joy Series LED TV's and features, installation process for curved TV and features .
 - Troubleshoot &
 - How to reduce repeat repairs . Check list for initial operation, Troubleshooting. :No Power & No Video,
 - Symptoms related to T -Con, LVDS, Main boards of LED TV, customer education, Awareness on liquid
 - log cases, importance of tool adherence.
- PC10.**
- DVD Player- Technology Overview. What is a DVD, Specifications of DVD, Advantages of DVD, and
 - Structure of a DVD Disc, DVD Video and Audio Format? Troubleshoot Parts of a DVD Player. Block
 - Diagram, Assembling a DVD Player.
- PC11.**
- Home Audio- Technology Overview. What is Home Theatre ,Surround sound basics How to install?
 - Speaker Set-up Guidelines, Wiring of Speakers Disassembly Process Block Diagram, Disassembly
 - Troubleshoot& features Troubleshooting (No power, Disc loading error, Remote control doesn't work,
 - No picture, Disc Freeze, No Disc reading error) , Home audio features , F/W method,



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/AV/02 ADVANCE SKILL ENHANCEMENT ON TROUBLES HOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV</i>	-	100	-	-
<p>PC1.</p> <ul style="list-style-type: none"> • Basic- Introduction of basic electronics. About Electricity, Electronics. What is ohm's law, what is voltage, current, resistance? Series circuit and parallel circuit. Audio Video Standard Tools Kit: Repair & installation. About Multimeter, Rotary selector switch, Sliding switch, Probes, Display, COM Plug, VΩ Plug, A Plug, DC Volt Range, DC Current Range, AC Volt Range, AC Current Range, Ohm Range, Frequency Range, Logic Range, Diode Range, Continuity. Measuring AC Volt, DC Volt, DC Current, AC 	-	-	-	-
<p>PC2.</p> <ul style="list-style-type: none"> • Safety and Precautions- Electrostatic Discharge Definitions of Electrostatic Discharge (ESD), Electrostatic Discharge Sensitive (ESDS), Electrostatic protected Area (EPA) What is Electrostatic • Discharge (ESD), Charge is generated all the time, Electrostatic Charge generation, Damage Criteria, • ESD comparison with germ Electrostatic Protected Area (EPA) Setup Methods of ESD Protection, • Methods of Handling Printed Board Assembly (PBA) 	-	-	-	-
<p>PC3.</p> <ul style="list-style-type: none"> • Soldering and Disordering- Basics of Soldering. What is Soldering, Soldering Tools, Disordering Tools, • and Soldering Methods Soldering Practice. Soldering Iron Usage Tips & Maintenance, Possible • Soldering Defects. 	-	-	-	-
<p>PC4. Types of TV's- Basic overview. Types of TV's, Basic terms & technology related to TV.</p>	-	-	-	-
<p>PC5.</p> <ul style="list-style-type: none"> • CRT TV- Technology Overview. What is Cathode Ray Tube, Advantages and Disadvantages, Colour • Transmission System, Health Concerns. 	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<p>PC6.</p> <ul style="list-style-type: none"> • LCD TV- Technology Overview. What is LCD, History of LCD TV, Working Principle of LCD, What is CCFL, • Features (CCFL), Advantages of LCD, Disadvantages of LCD, Key features of LCD TV, Wiring Layout of • LCD TV, and Major components. Disassembly Process Assembling disassembling Process, Identification • of parts. 	-	-	-	-
<p>PC7.</p> <ul style="list-style-type: none"> • LED TV- Technology Overview. What is LED, LED Backlighting, Features of LED backlit LCD TVs, How LED • technology is used in LCD TVs, Full -Array vs. Edge Lit, Energy Consumption, How LED TV works . • Disassembly Process . Assembling disassembling Process, Identification of parts 	-	-	-	-
<p>PC8.</p> <ul style="list-style-type: none"> • PLASMA TV- Technology Overview Basic Theory of Plasma, History of Plasma Display, Basic concept of • Plasma, What is plasma, Inside a Plasma Display, How Plasma Displays Work, Advantages of Plasma T • V, Disadvantages of Plasma TV. Disassembly Process . Assembling disassembling Process, Identification • of parts . 	-	-	-	-
<p>PC9.</p> <ul style="list-style-type: none"> • Smart TV- Joy Series & Curved TV: Installation& features. TV Model Nomenclature, installation process • of Joy Series LED TV's and features, installation process for curved TV and features . Troubleshoot & • How to reduce repeat repairs . Check list for initial operation, Troubleshooting. :No Power & No Video, • Symptoms related to T -Con, LVDS, Main boards of LED TV, customer education, Awareness on liquid • log cases, importance of tool adherence. 	-	-	-	-
<p>PC10.</p> <ul style="list-style-type: none"> • DVD Player- Technology Overview. What is a DVD, Specifications of DVD, Advantages of DVD, and • Structure of a DVD Disc, DVD Video and Audio Format? Troubleshoot Parts of a DVD Player. Block • Diagram, Assembling a DVD Player. 	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. <ul style="list-style-type: none">• Home Audio- Technology Overview. What is Home Theatre ,Surround sound basics How to install?• Speaker Set-up Guidelines, Wiring of Speakers Disassembly Process Block Diagram, Disassembly• Troubleshoot& features Troubleshooting (No power, Disc loading error, Remote control doesn't work,• No picture, Disc Freeze, No Disc reading error) , Home audio features , F/W method,	-	-	-	-
NOS Total	-	100	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N2103
NOS Name	ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV
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



Qualification Pack

MSME/ELE/N2102: ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV

Description

After completion of course Student should be able to Understand about Different types of TV, DVD Player and Home Theatre.

Scope

The scope covers the following :

- After completion of course Student should be able to Understand about Different types of TV, DVD Player and Home Theatre.

Elements and Performance Criteria

MSME/AV/02 ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV

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

- PC1.**
- Basic- Introduction of basic electronics. About Electricity, Electronics. What is ohm's law, what is voltage, current, resistance? Series circuit and parallel circuit. Audio Video Standard Tools Kit: Repair &
 - installation. About Multimeter, Rotary selector switch, Sliding switch, Probes, Display, COM Plug, VΩ
 - Plug, A Plug, DC Volt Range, DC Current Range, AC Volt Range, AC Current Range, Ohm Range,
 - Frequency Range, Logic Range, Diode Range, Continuity. Measuring AC Volt, DC Volt, DC Current, AC
- PC2.**
- Safety and Precautions- Electrostatic Discharge Definitions of Electrostatic Discharge (ESD),
 - Electrostatic Discharge Sensitive (ESDS), Electrostatic protected Area (EPA) What is Electrostatic
 - Discharge (ESD), Charge is generated all the time, Electrostatic Charge generation, Damage Criteria,
 - ESD comparison with germ Electrostatic Protected Area (EPA) Setup Methods of ESD Protection,
 - Methods of Handling Printed Board Assembly (PBA)
- PC3.**
- Soldering and Disordering- Basics of Soldering. What is Soldering, Soldering Tools, Disordering Tools,
 - and Soldering Methods Soldering Practice. Soldering Iron Usage Tips & Maintenance, Possible
 - Soldering Defects.
- PC4.**
- Types of TV's- Basic overview. Types of TV's, Basic terms & technology related to TV.



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- PC5.**
- CRT TV- Technology Overview. What is Cathode Ray Tube, Advantages and Disadvantages, Colour
 - Transmission System, Health Concerns.
- PC6.**
- LCD TV- Technology Overview. What is LCD, History of LCD TV, Working Principle of LCD, What is CCFL,
 - Features (CCFL), Advantages of LCD, Disadvantages of LCD, Key features of LCD TV, Wiring Layout of
 - LCD TV, and Major components. Disassembly Process Assembling disassembling Process, Identification
 - of parts.
- PC7.**
- LED TV- Technology Overview. What is LED, LED Backlighting, Features of LED backlit LCD TVs, How LED
 - technology is used in LCD TVs, Full -Array vs. Edge Lit, Energy Consumption, How LED TV works .
 - Disassembly Process . Assembling disassembling Process, Identification of parts
- PC8.**
- PLASMA TV- Technology Overview Basic Theory of Plasma, History of Plasma Display, Basic concept of
 - Plasma, What is plasma, Inside a Plasma Display, How Plasma Displays Work, Advantages of Plasma T
 - V, Disadvantages of Plasma TV. Disassembly Process . Assembling disassembling Process, Identification
 - of parts .
- PC9.**
- Smart TV- Joy Series & Curved TV: Installation& features. TV Model Nomenclature, installation process
 - of Joy Series LED TV's and features, installation process for curved TV and features .
 - Troubleshoot &
 - How to reduce repeat repairs . Check list for initial operation, Troubleshooting. :No Power & No Video,
 - Symptoms related to T -Con, LVDS, Main boards of LED TV, customer education, Awareness on liquid
 - log cases, importance of tool adherence.
- PC10.**
- DVD Player- Technology Overview. What is a DVD, Specifications of DVD, Advantages of DVD, and
 - Structure of a DVD Disc, DVD Video and Audio Format? Troubleshoot Parts of a DVD Player. Block
 - Diagram, Assembling a DVD Player.
- PC11.**
- Home Audio- Technology Overview. What is Home Theatre ,Surround sound basics How to install?
 - Speaker Set-up Guidelines, Wiring of Speakers Disassembly Process Block Diagram, Disassembly
 - Troubleshoot& features Troubleshooting (No power, Disc loading error, Remote control doesn't work,
 - No picture, Disc Freeze, No Disc reading error) , Home audio features , F/W method,



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/AV/02 ADVANCE SKILL ENHANCEMENT ON TROUBLES HOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV</i>	100	-	-	-
PC1. <ul style="list-style-type: none"> • Basic- Introduction of basic electronics. About Electricity, Electronics. What is ohm's law, what is voltage, current, resistance? Series circuit and parallel circuit. Audio Video Standard Tools Kit: Repair & installation. About Multimeter, Rotary selector switch, Sliding switch, Probes, Display, COM Plug, VΩ Plug, A Plug, DC Volt Range, DC Current Range, AC Volt Range, AC Current Range, Ohm Range, Frequency Range, Logic Range, Diode Range, Continuity. Measuring AC Volt, DC Volt, DC Current, AC 	-	-	-	-
PC2. <ul style="list-style-type: none"> • Safety and Precautions- Electrostatic Discharge Definitions of Electrostatic Discharge (ESD), Electrostatic Discharge Sensitive (ESDS), Electrostatic protected Area (EPA) What is Electrostatic • Discharge (ESD), Charge is generated all the time, Electrostatic Charge generation, Damage Criteria, • ESD comparison with germ Electrostatic Protected Area (EPA) Setup Methods of ESD Protection, • Methods of Handling Printed Board Assembly (PBA) 	-	-	-	-
PC3. <ul style="list-style-type: none"> • Soldering and Disordering- Basics of Soldering. What is Soldering, Soldering Tools, Disordering Tools, • and Soldering Methods Soldering Practice. Soldering Iron Usage Tips & Maintenance, Possible • Soldering Defects. 	-	-	-	-
PC4. Types of TV's- Basic overview. Types of TV's, Basic terms & technology related to TV.	-	-	-	-
PC5. <ul style="list-style-type: none"> • CRT TV- Technology Overview. What is Cathode Ray Tube, Advantages and Disadvantages, Colour • Transmission System, Health Concerns. 	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC6. <ul style="list-style-type: none">• LCD TV- Technology Overview. What is LCD, History of LCD TV, Working Principle of LCD, What is CCFL,• Features (CCFL), Advantages of LCD, Disadvantages of LCD, Key features of LCD TV, Wiring Layout of• LCD TV, and Major components. Disassembly Process Assembling disassembling Process, Identification• of parts.	-	-	-	-
PC7. <ul style="list-style-type: none">• LED TV- Technology Overview. What is LED, LED Backlighting, Features of LED backlit LCD TVs, How LED• technology is used in LCD TVs, Full -Array vs. Edge Lit, Energy Consumption, How LED TV works .• Disassembly Process . Assembling disassembling Process, Identification of parts	-	-	-	-
PC8. <ul style="list-style-type: none">• PLASMA TV- Technology Overview Basic Theory of Plasma, History of Plasma Display, Basic concept of• Plasma, What is plasma, Inside a Plasma Display, How Plasma Displays Work, Advantages of Plasma T• V, Disadvantages of Plasma TV. Disassembly Process . Assembling disassembling Process, Identification• of parts .	-	-	-	-
PC9. <ul style="list-style-type: none">• Smart TV- Joy Series & Curved TV: Installation& features. TV Model Nomenclature, installation process• of Joy Series LED TV's and features, installation process for curved TV and features . Troubleshoot &• How to reduce repeat repairs . Check list for initial operation, Troubleshooting. :No Power & No Video,• Symptoms related to T -Con, LVDS, Main boards of LED TV, customer education, Awareness on liquid• log cases, importance of tool adherence.	-	-	-	-
PC10. <ul style="list-style-type: none">• DVD Player- Technology Overview. What is a DVD, Specifications of DVD, Advantages of DVD, and• Structure of a DVD Disc, DVD Video and Audio Format? Troubleshoot Parts of a DVD Player. Block• Diagram, Assembling a DVD Player.	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. <ul style="list-style-type: none">• Home Audio- Technology Overview. What is Home Theatre ,Surround sound basics How to install?• Speaker Set-up Guidelines, Wiring of Speakers Disassembly Process Block Diagram, Disassembly• Troubleshoot& features Troubleshooting (No power, Disc loading error, Remote control doesn't work,• No picture, Disc Freeze, No Disc reading error) , Home audio features , F/W method,	-	-	-	-
NOS Total	100	-	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N2102
NOS Name	ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV
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
NSQF Clearance Date	30/04/2024



Qualification Pack

MSME/ELE/N2101: MSME/AV/01 STUDY ON BASIC ELECTRICAL /ELECTRONICS, SAFETY & HAND TOOLS -AV

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/AV/01 STUDY ON BASIC ELECTRICAL /ELECTRONICS, SAFETY & HAND TOOLS -AV

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.



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/AV/01 STUDY ON BASIC ELECTRICAL /ELECTRONICS, SAFETY & HAND TOOLS -AV</i>	100	-	-	-
PC1. <ul style="list-style-type: none">• 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. <ul style="list-style-type: none">• 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. <ul style="list-style-type: none">• Basic electronics- Process of Inductors. Describe Conductor, insulator, wire. Describe the types of• Power supplies. 20 Process of Soldering, disordering equipment's.	-	-	-	-
PC4. <ul style="list-style-type: none">• Semiconductor- Semiconductor physics. Semiconductor diodes. Filters. Special purpose diodes• Power supply.	-	-	-	-
PC5. <ul style="list-style-type: none">• Transistor and its application- Types of transistor. BJT. FET. Identify transistor terminals.• Applications of transistor.	-	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC6. <ul style="list-style-type: none">• 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/N2101
NOS Name	MSME/AV/01 STUDY ON BASIC ELECTRICAL /ELECTRONICS, SAFETY & HAND TOOLS -AV
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
NSQF Clearance Date	30/04/2024



Qualification Pack

MSME/ELE/N2104: Employability skills 08

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 & Entrepreneurship

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



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



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/ES/ 01 Employability skills & Entrepreneurship</i>	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	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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 costs	-	-	-	-
PC24. Describe the different types of insurance products	-	-	-	-
PC25. Discuss the main types of electronic funds transfers	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	MSME/ELE/N2104
NOS Name	Employability skills 08
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



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National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
MSME/ELE/N2105.ON JOB TRAINING	-	-	-	100	100	20
MSME/ELE/N2103.ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV	-	100	-	-	100	20
MSME/ELE/N2102.ADVANCE SKILL ENHANCEMENT ON TROUBLESHOOTING, ASSEMBLY, DISASSEMBLY, INSTALLATION & DEMONSTRATION ON RESPECTIVE PRODUCTS -AV	100	-	-	-	100	20
MSME/ELE/N2101.MSME/AV/01 STUDY ON BASIC ELECTRICAL /ELECTRON ICS, SAFETY & HAND TOOLS -AV	100	-	-	-	100	20
MSME/ELE/N2104.Employability skills 08	100	-	-	-	100	20
Total	300	100	-	100	500	100



Qualification Pack

Acronyms

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



Qualification Pack

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.



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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.