



Multi Skill Technician (Electrical)

QP Code: ELE/Q3115

Version: 1.0

NSQF Level: 4

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ELE/Q3115: Multi Skill Technician (Electrical)

Brief Job Description

The individual in this job is responsible for diagnosing and repairing faults in multiple small domestic home appliances. The individual needs to also install the appliance, if needed, and interact with customers to diagnose the problem and possible causes and replace faulty modules

Personal Attributes

The individual in this job needs to be self-motivated, inquisitive and analytical. The individual must be willing to work in the field and travel through the day from one customer premises to another. The individual also needs to be punctual, patience, trustworthy and possess an amenable behaviour

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [ELE/N3147: Engage with the Customers for Service](#)
2. [ELE/N3148: Diagnose and repair faults in LED light](#)
3. [ELE/N3149: Diagnose and fix faults in geyser and fans](#)
4. [ELE/N3150: Install new and repair dysfunctional water purifiers](#)
5. [ELE/N3151: Repairing dysfunctional mixer/juicer/grinder](#)
6. [ELE/N3152: Developing entrepreneurial skills](#)
7. [ELE/N9905: Work effectively at the workplace](#)
8. [ELE/N1002: Apply health and safety practices at the workplace](#)

Qualification Pack (QP) Parameters

Sector	Electronics
Sub-Sector	Consumer Electronics & IT Hardware
Occupation	After Sales Service
Country	India
NSQF Level	4

Credits	NA
Aligned to NCO/ISCO/ISIC Code	NCO-2016/NIL
Minimum Educational Qualification & Experience	10th Class with 3 Years of experience (relevant) OR Certificate-NSQF ((of Level-3 in the domain of Electronics / Electrical / Mechanical) OR Diploma (in Electrical or Electronics Engineering)) OR 12th Class/I.T.I ((After 10th)) with 1 Year of experience (relevant)
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	30/12/2021
Next Review Date	30/12/2026
Deactivation Date	10/01/2024
NSQC Approval Date	30/12/2021
Version	1.0
Reference code on NQR	2021/EHW/ESSC/04793
NQR Version	1.0

Remarks:

NA

ELE/N3147: Engage with the Customers for Service

Description

This OS unit is about interacting with the customer to understand their requirements and issues with respect to a problem in the appliance.

Scope

The scope covers the following :

- This unit/ task covers the following:
- Interacting with the customers
- Analysing problems and suggesting possible solutions

Elements and Performance Criteria

Interacting with the customers

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

- PC1.** collect and analyse the job requirement from supervisors or appropriate business units
- PC2.** assess customer complaint or installation schedule registered with customer care
- PC3.** call the customer to confirm the request for service and seek preliminary details patiently and respectfully
- PC4.** ascertain customer location in order to make the route plan for the day
- PC5.** collect appropriate tools and parts based on the problem and resolution identified and carry them for customer visit
- PC6.** check the warranty status and annual maintenance contract of the appliance
- PC7.** enquire on the history of problem with the appliance, confirm the issue and educate the customer about possible causes and solutions.
- PC8.** inform the customers of any applicable costs for servicing, repair and replacement of parts based on the problem and resolution identified and communicated

Analysing problems and suggesting possible solutions

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

- PC9.** explain possible solutions and the requisite timelines and processes
- PC10.** test the appliance's performance and request the customer to verify the service and/or repair by checking the appliance themselves
- PC11.** verify if the customer is satisfied by the job done and take feedback for the same
- PC12.** complete the job as per informed time and quality
- PC13.** prepare the invoice for the completed work; and accordingly collect payment from the customer through organizationally approved and customer-preferred modes of payment

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** company policies on customer care, maintaining documentation, code of conduct and organisation culture, typical customer profile and reporting structure
- KU2.** how to communicate with customers in order to put them at ease
- KU3.** company products and recurring problems reported in consumer appliances
- KU4.** basic electronic concepts and electrical/mechanical modules of various appliances
- KU5.** models of different appliances of the company and their common and distinguishing features
- KU6.** functionality of different appliances and new features
- KU7.** precautions while handling field calls and dealing with customers
- KU8.** relevant reference sheets, manuals and documents to carry in the field
- KU9.** importance of personal grooming
- KU10.** how to be polite and courteous under all circumstances
- KU11.** importance of maintaining clean surface/work area
- KU12.** telecommunication (phone) etiquette such as appropriate times to call a customer, clarity of verbal communication and respectfully seeking feedback or reviewing completed work, and preparation of post-service documentation to the customer's satisfaction

Generic Skills (GS)

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

- GS1.** complete forms such as work orders, invoices, maintenance records
- GS2.** maintain personal grooming
- GS3.** read documents and signs such as job sheets or work orders, warnings, instructions and other text material on product labels, components, etc.
- GS4.** interpret product and module serial numbers for details such as make, date, availability
- GS5.** coordinate with the supervisor for clarifications on the job requirement
- GS6.** listen carefully to customer and interpret customer statement of symptoms
- GS7.** communicate in local language or in the customer's preferred language
- GS8.** inform the customer about product, contractual issues such as warranty, cost of service and module replacement
- GS9.** inform the customer about the precautions to be taken in order to avoid recurrence of problem
- GS10.** follow organization's standard operating procedures while making decisions
- GS11.** coordinate with supervisor and take approval in case the decision has to be made for exceptions
- GS12.** work with supervisor and co-workers to achieve smooth workflow and share technical knowledge
- GS13.** be polite, patient and courteous under all circumstances with all types of customers
- GS14.** maintain socio-cultural etiquette such as respecting personal space, seeking permission before entering premises or private rooms, communicating in gender-neutral terms

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interacting with the customers</i>	25	32	-	6
PC1. collect and analyse the job requirement from supervisors or appropriate business units	3	4	-	-
PC2. assess customer complaint or installation schedule registered with customer care	3	4	-	-
PC3. call the customer to confirm the request for service and seek preliminary details patiently and respectfully	3	4	-	1
PC4. ascertain customer location in order to make the route plan for the day	3	4	-	1
PC5. collect appropriate tools and parts based on the problem and resolution identified and carry them for customer visit	3	4	-	1
PC6. check the warranty status and annual maintenance contract of the appliance	3	4	-	1
PC7. enquire on the history of problem with the appliance, confirm the issue and educate the customer about possible causes and solutions.	3	4	-	1
PC8. inform the customers of any applicable costs for servicing, repair and replacement of parts based on the problem and resolution identified and communicated	4	4	-	1
<i>Analysing problems and suggesting possible solutions</i>	15	18	-	4
PC9. explain possible solutions and the requisite timelines and processes	3	4	-	1
PC10. test the appliance's performance and request the customer to verify the service and/or repair by checking the appliance themselves	3	4	-	-
PC11. verify if the customer is satisfied by the job done and take feedback for the same	3	3	-	1
PC12. complete the job as per informed time and quality	3	3	-	1

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. prepare the invoice for the completed work; and accordingly collect payment from the customer through organizationally approved and customer-preferred modes of payment	3	4	-	1
NOS Total	40	50	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N3147
NOS Name	Engage with the Customers for Service
Sector	Electronics
Sub-Sector	Consumer Electronics & IT Hardware
Occupation	After Sales Service
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

ELE/N3148: Diagnose and repair faults in LED light

Description

This unit is about diagnosing the fault in the non-functional light and mending them to make it operational again.

Scope

The scope covers the following :

- Diagnose faults in LED lights
- Repair faulty LED lights

Elements and Performance Criteria

Diagnose faults in LED Lights

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

- PC1.** connect the non-functional LED Light with an AC source and switch it on and inspect any loose, de-soldered wires and connections if the light does not switch on
- PC2.** solder wires and make connections of loose, de-soldered wires to make the light operational again
- PC3.** dismantle the LED light if no loose, de-soldered wires are found and repair/replace the LED light engine with DC supply if found faulty
- PC4.** check the supply unit with AC supply/multimeter to find out the voltage/current output if LED light engine is not defective
- PC5.** compare the actual voltage output with the desirable voltage to find out the damaged section of the supply using multimeter

Repair faulty LED lights

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

- PC6.** repair/replace the damaged components/SMPs and recheck the output voltage/current of the supply unit again with multimeter
- PC7.** check the non-functional/damaged LED strips in the light and replace the burnt out/damaged LED strips
- PC8.** check the LED array after connecting it with AC source and switching it on
- PC9.** reassemble the LED light with the repaired and/or replaced unit and test its performance
- PC10.** place the light back into its fixture and again test its performance

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** company testing & repairing standards and personnel and material management
- KU2.** company standard operating procedures and processes related to LED Luminary testing and repair
- KU3.** safety and quality standards followed in the organization

- KU4.** basics of power electronics and its usages in lighting controls, or LED power supplies and LED drivers
- KU5.** usage of multimeter, tester, LCR meter and power analyser
- KU6.** various electronic & electrical components, materials and their specific properties & usages
- KU7.** special safety and handling precautions to be taken during LED luminary testing

Generic Skills (GS)

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

- GS1.** note problems on job sheet and details of work done
- GS2.** read warnings, instructions and other text material on product labels, components, etc.
- GS3.** read job sheets or work orders and product/module serial numbers and interpret details such as make, date, availability etc.
- GS4.** read warnings, instructions and other text material on product labels, components, etc.
- GS5.** follow standard operating procedures while making decisions and take approval from supervisor
- GS6.** work with supervisor and co-workers to achieve smooth workflow and share knowledge and learning
- GS7.** seek inputs at assessing the problems
- GS8.** complete forms such as work orders, invoices, maintenance records

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Diagnose faults in LED Lights</i>	18	30	-	5
PC1. connect the non-functional LED Light with an AC source and switch it on and inspect any loose, de-soldered wires and connections if the light does not switch on	3	4	-	1
PC2. solder wires and make connections of loose, de-soldered wires to make the light operational again	3	8	-	1
PC3. dismantle the LED light if no loose, de-soldered wires are found and repair/replace the LED light engine with DC supply if found faulty	4	8	-	1
PC4. check the supply unit with AC supply/multimeter to find out the voltage/current output if LED light engine is not defective	4	4	-	1
PC5. compare the actual voltage output with the desirable voltage to find out the damaged section of the supply using multimeter	4	6	-	1
<i>Repair faulty LED lights</i>	22	20	-	5
PC6. repair/replace the damaged components/SMPs and recheck the output voltage/current of the supply unit again with multimeter	6	8	-	1
PC7. check the non-functional/damaged LED strips in the light and replace the burnt out/damaged LED strips	4	8	-	1
PC8. check the LED array after connecting it with AC source and switching it on	4	-	-	1
PC9. reassemble the LED light with the repaired and/or replaced unit and test its performance	4	4	-	1
PC10. place the light back into its fixture and again test its performance	4	-	-	1
NOS Total	40	50	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N3148
NOS Name	Diagnose and repair faults in LED light
Sector	Electronics
Sub-Sector	Consumer Electronics & IT Hardware
Occupation	After Sales Service
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

ELE/N3149: Diagnose and fix faults in geyser and fans

Description

This unit is about diagnosing the fault in the non-functional geyser and fans and mending the appliance to make it operational again.

Scope

The scope covers the following :

- Diagnose faults in geyser or fan
- Repair faulty geyser or fan

Elements and Performance Criteria

Diagnose faults in geyser or fan

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

- PC1.** perform basic diagnostic tests for power supply, external faults like improper mounting, power supply etc. for faulty fan/geyser
- PC2.** check the mains outlet and basic electrical/electronic components with a multi-meter for correct voltage output and proper connectivity
- PC3.** disassemble the fan/geyser and perform functional tests
- PC4.** correct the minor external faults like loose connections, improper mounting etc.

Repair faulty geyser or fan

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

- PC5.** replace the faulty component or module and reassemble the unit
- PC6.** train and seek help from assistant/colleague (if any)
- PC7.** inform supervisor and follow the company's guidelines in case the replacement components are not available
- PC8.** test the functionality of the fan/geysers per the service manual
- PC9.** demonstrate and confirm the functionality of the fan/geyser to the customer
- PC10.** clean the repair area of all the debris & dispose off them with customer's permission
- PC11.** complete documentation procedures to record complaint closure, collect the applicable charges from the customer
- PC12.** collect the defective components and handover them to stores

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** company standard operating procedures and processes related to fans and geysers testing and repair
- KU2.** company's recommended accessories, extended warranty & AMC schemes for the Ceiling Fan / Geyser – if any

- KU3.** recommended installation procedure and its importance in optimum performance of the Ceiling Fan / Geyser
- KU4.** basic diagnostic and functional tests for fans and geysers
- KU5.** functionality and components or parts of fans and geysers
- KU6.** troubleshooting minor faults
- KU7.** hazards associated with breakdown service procedure & how to minimise them
- KU8.** typical faults in components and how to repair them

Generic Skills (GS)

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

- GS1.** follow standard operating procedures while making decisions and take approval from supervisor
- GS2.** work with supervisor and co-workers to achieve smooth workflow and share knowledge and learning
- GS3.** seek inputs at assessing the problems
- GS4.** complete forms such as work orders, invoices, maintenance records
- GS5.** note problems on job sheet and details of work done
- GS6.** read warnings, instructions and other text material on product labels, components, etc.
- GS7.** read job sheets or work orders and product/module serial numbers and interpret details such as make, date, availability etc.
- GS8.** read warnings, instructions and other text material on product labels, components, etc.

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Diagnose faults in geyser or fan</i>	14	22	-	3
PC1. perform basic diagnostic tests for power supply, external faults like improper mounting, power supply etc. for faulty fan/geyser	3	6	-	1
PC2. check the mains outlet and basic electrical/electronic components with a multi-meter for correct voltage output and proper connectivity	4	4	-	1
PC3. disassemble the fan/geyser and perform functional tests	3	6	-	1
PC4. correct the minor external faults like loose connections, improper mounting etc.	4	6	-	-
<i>Repair faulty geyser or fan</i>	26	28	-	7
PC5. replace the faulty component or module and reassemble the unit	4	6	-	1
PC6. train and seek help from assistant/colleague (if any)	3	-	-	1
PC7. inform supervisor and follow the company's guidelines in case the replacement components are not available	3	4	-	-
PC8. test the functionality of the fan/geysers per the service manual	4	5	-	1
PC9. demonstrate and confirm the functionality of the fan/geyser to the customer	4	4	-	1
PC10. clean the repair area of all the debris & dispose off them with customer's permission	2	3	-	1
PC11. complete documentation procedures to record complaint closure, collect the applicable charges from the customer	4	3	-	1
PC12. collect the defective components and handover them to stores	2	3	-	1
NOS Total	40	50	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N3149
NOS Name	Diagnose and fix faults in geyser and fans
Sector	Electronics
Sub-Sector	Consumer Electronics & IT Hardware
Occupation	After Sales Service
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

ELE/N3150: Install new and repair dysfunctional water purifiers

Description

This OS unit is about installing newly purchased water purifier at customer location to make it ready to use.

Scope

The scope covers the following :

- Perform pre-installation tasks
- Install and check functionality of the water purifier

Elements and Performance Criteria

Perform pre-installation tasks

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

- PC1.** analyse customer location and plan the route to visit the customer's premises as per job card/work sheet
- PC2.** interact with the customer after reaching the site, greet him/her and understand whether the water purifier would be placed under the sink (UTS) or on the wall
- PC3.** analyse the location meets structural requirements such as distance from power supply, vicinity to plumbing point and so on
- PC4.** inform the customer for any pre-installation work to be carried out
- PC5.** inform the customer about requirements for adequate water pressure at the inlet source
- PC6.** perform necessary markings for placement of the water purifier unit
- PC7.** analyse if all requirements are met proceed with installation otherwise, if requirements are not met, then seek appointment for the next visit
- PC8.** open the packaging of the purifier in front of the customer , informing them timely about the process and tasks
- PC9.** check that the product matches the customer's order with all the supporting accessories and that all tools and fitments required for installation are available
- PC10.** clear up the packaging material waste and dispose as per company's norms

Install and check functionality of the water purifier

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

- PC11.** make measurements at the identified location and drill holes while ensuring no internal wiring damage takes place
- PC12.** mount and securely fasten the filter
- PC13.** drain the inlet line before connecting it to the water purifier and connect the outlet pipe to the drain (if applicable)
- PC14.** ensure that the filter is aligned as per instructions in the installation manual
- PC15.** test the purifier to ensure that there is no leakage at any point
- PC16.** demonstrate the features and utility to the customer
- PC17.** explain maintenance procedures to be followed while using the water purifier

Diagnose faults and fix dysfunctional components

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

- PC18.** diagnose the fault based on customer interaction
- PC19.** check if the water pressure is as specified by company standards
- PC20.** cut the water supply and unplug the unit to check for faults and proceed with repair
- PC21.** follow all safety precautions and cleanliness norms such as placing a piece of cloth or towel under the unit in order to avoid any water spills
- PC22.** carry out basic inspection of feed water valve, tank valve, tubing, housing etc.
- PC23.** replace or repair inspected component at location after identification of fault, otherwise, seek customers permission to take the unit to the service centre
- PC24.** replace or repair inspected component at location after identification of fault, otherwise, seek customers permission to take the unit to the service centre

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** company policies on delivery standards, material and personnel management, repair/installation call closure
- KU2.** company sales, installation and after sales support policy such as product warranty and other terms and conditions
- KU3.** importance of the individual role in the workflow and reporting structure
- KU4.** installation site requirements (structural requirements, plumbing etc.)
- KU5.** water flow diagram and electrical circuit diagram of the Water Purifier
- KU6.** water purification process and different layers of filter present within the unit such as sediment filter, carbon block filter, TFC/TFM membrane, inline carbon filter etc.
- KU7.** different technologies in water purification (such as reverse osmosis, de ionisation etc.) and different features, functionalities of various models
- KU8.** safety precautions to be taken while installing
- KU9.** manual-based procedure of installing the water purifier and waste disposal procedures
- KU10.** repairing various accessories and parts accompanying the unit
- KU11.** operating the water purifier and verifying its features and functionalities after installation

Generic Skills (GS)

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

- GS1.** write forms such as work orders, invoices, maintenance records and note problems on job sheet and details of work area
- GS2.** read warnings, instructions and other text material on product labels such as serial no., components, etc.
- GS3.** Interpret technical drawings (such as wiring, etc.) and job specifications/instructions accurately
- GS4.** receive and ask for clarifications from supervisor on the job requirement
- GS5.** maintain personal grooming especially when visiting customer site

- GS6.** listen carefully to customer, interpret the customer's description of issues; and communicate in local language
- GS7.** educate and inform customer about product, contractual issues such as warranty, cost of service and module replacement
- GS8.** inform customer of precautions to avoid recurrence of problem
- GS9.** interact with the customer while being polite, patient and use proper etiquette under all circumstances with all types of customers
- GS10.** ensure that the customer is at ease and generate customer confidence in the company product and procedures
- GS11.** follow standard operating procedures while making decisions and seek approval from supervisor
- GS12.** work with supervisor and co-workers to achieve smooth workflow and share knowledge and learning

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform pre-installation tasks</i>	20	20	-	4
PC1. analyse customer location and plan the route to visit the customer's premises as per job card/work sheet	2	2	-	-
PC2. interact with the customer after reaching the site, greet him/her and understand whether the water purifier would be placed under the sink (UTS) or on the wall	2	2	-	-
PC3. analyse the location meets structural requirements such as distance from power supply, vicinity to plumbing point and so on	2	2	-	-
PC4. inform the customer for any pre-installation work to be carried out	2	2	-	-
PC5. inform the customer about requirements for adequate water pressure at the inlet source	2	2	-	1
PC6. perform necessary markings for placement of the water purifier unit	2	2	-	-
PC7. analyse if all requirements are met proceed with installation otherwise, if requirements are not met, then seek appointment for the next visit	2	2	-	-
PC8. open the packaging of the purifier in front of the customer , informing them timely about the process and tasks	2	2	-	1
PC9. check that the product matches the customer's order with all the supporting accessories and that all tools and fitments required for installation are available	2	2	-	1
PC10. clear up the packaging material waste and dispose as per company's norms	2	2	-	1
<i>Install and check functionality of the water purifier</i>	10	16	-	3
PC11. make measurements at the identified location and drill holes while ensuring no internal wiring damage takes place	2	2	-	1
PC12. mount and securely fasten the filter	1	3	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. drain the inlet line before connecting it to the water purifier and connect the outlet pipe to the drain (if applicable)	1	3	-	1
PC14. ensure that the filter is aligned as per instructions in the installation manual	1	2	-	-
PC15. test the purifier to ensure that there is no leakage at any point	1	2	-	-
PC16. demonstrate the features and utility to the customer	2	2	-	-
PC17. explain maintenance procedures to be followed while using the water purifier	2	2	-	1
<i>Diagnose faults and fix dysfunctional components</i>	10	14	-	3
PC18. diagnose the fault based on customer interaction	2	2	-	-
PC19. check if the water pressure is as specified by company standards	1	2	-	-
PC20. cut the water supply and unplug the unit to check for faults and proceed with repair	1	2	-	1
PC21. follow all safety precautions and cleanliness norms such as placing a piece of cloth or towel under the unit in order to avoid any water spills	2	2	-	-
PC22. carry out basic inspection of feed water valve, tank valve, tubing, housing etc.	1	2	-	1
PC23. replace or repair inspected component at location after identification of fault, otherwise, seek customers permission to take the unit to the service centre	2	2	-	1
PC24. replace or repair inspected component at location after identification of fault, otherwise, seek customers permission to take the unit to the service centre	1	2	-	-
NOS Total	40	50	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N3150
NOS Name	Install new and repair dysfunctional water purifiers
Sector	Electronics
Sub-Sector	Consumer Electronics & IT Hardware
Occupation	After Sales Service
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

ELE/N3151: Repairing dysfunctional mixer/juicer/grinder

Description

This unit is about understanding the customer complaints, identifying the fault and fixing the mixer/juicer/grinder.

Scope

The scope covers the following :

- Diagnose faults and repair/replace dysfunctional parts
- Test appliance functionality after job completion

Elements and Performance Criteria

Diagnose faults and repair/replace dysfunctional parts

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

- PC1.** understand usage pattern of the mixer/grinder from the customer and then diagnose the fault based on initial inspection
- PC2.** unplug the unit, turn overload switch back to original position incase of overload of supply
- PC3.** conduct basic tests such as power supply inspection, volt ampere test and earthing test of power supply and so on
- PC4.** inspect every module of the unit if the fault is not identified then send it to factory
- PC5.** replace component at location if the fault is identified
- PC6.** fix next visit to replace faulty module with functional one incase of unavailability of the module at site or return the repaired module

Test appliance functionality after job completion

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

- PC7.** after reassembling the unit, plug to power source and confirm that unit is functioning
- PC8.** demonstrate and confirm functionality of the unit in front of the customer
- PC9.** inform the customer about cleaning procedures and other best practices
- PC10.** complete all documentation procedures to record complaint closure and collect necessary payments from the customer

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** company's policies on repairing/replacement of materials and returning faulty parts/modules
- KU2.** reporting and documentation processes
- KU3.** different models of mixers, grinders and their features and functionalities
- KU4.** basic electrical fundamentals with regard to functioning of motors, circuit breakers, etc and basic electronics (components such as diode, transformer, LED, photo transistor, capacitor, resistor, inductor, thermistor, ICs)

- KU5.** fundamentals of electricity such as Ohms law, difference between AC and DC, calculation of energy consumption of appliances, understanding of domestic wiring, understanding of series and parallel connections
- KU6.** troubleshooting knowledge with respect to home appliances and hazards their causes and prevention/personal safety
- KU7.** energy ratings such BEE rating and concepts of e- waste

Generic Skills (GS)

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

- GS1.** seek help from the supervisor on the job requirement for clarifications
- GS2.** listen carefully to customer, interpret the customer's description of issues; and communicate in preferred (Hindi or Regional) language
- GS3.** inform the customer about product condition and contractual issues (such as warranty, cost of service and module replacement)
- GS4.** inform customer of precautions to avoid recurrence of problem
- GS5.** follow standard operating procedures and hierarchy while making decisions regarding customer visit

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Diagnose faults and repair/replace dysfunctional parts</i>	24	29	-	6
PC1. understand usage pattern of the mixer/grinder from the customer and then diagnose the fault based on initial inspection	4	4	-	1
PC2. unplug the unit, turn overload switch back to original position incase of overload of supply	4	5	-	1
PC3. conduct basic tests such as power supply inspection, volt ampere test and earthing test of power supply and so on	4	6	-	1
PC4. inspect every module of the unit if the fault is not identified then send it to factory	4	4	-	1
PC5. replace component at location if the fault is identified	4	5	-	1
PC6. fix next visit to replace faulty module with functional one incase of unavailability of the module at site or return the repaired module	4	5	-	1
<i>Test appliance functionality after job completion</i>	16	21	-	4
PC7. after reassembling the unit, plug to power source and confirm that unit is functioning	4	6	-	1
PC8. demonstrate and confirm functionality of the unit in front of the customer	4	5	-	1
PC9. inform the customer about cleaning procedures and other best practices	4	5	-	1
PC10. complete all documentation procedures to record complaint closure and collect necessary payments from the customer	4	5	-	1
NOS Total	40	50	-	10

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N3151
NOS Name	Repairing dysfunctional mixer/juicer/grinder
Sector	Electronics
Sub-Sector	Consumer Electronics & IT Hardware
Occupation	After Sales Service
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2024
NSQC Clearance Date	30/12/2021

ELE/N3152: Developing entrepreneurial skills

Description

This OS unit is about evaluating an opportunity and developing entrepreneurial skills.

Scope

The scope covers the following :

- Evaluating an opportunity before starting a micro- enterprise
- Setting up an enterprise

Elements and Performance Criteria

Evaluating an opportunity before starting a microenterprise

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

- PC1.** identify gaps in markets for different products/services
- PC2.** identify the customer needs for different products/services
- PC3.** identify different features of products/services to be marketed
- PC4.** identify the cheap and regular sources of supply for raw materials
- PC5.** determine the pricing of the products depending upon competitive businesses
- PC6.** identify various mediums (online/offline) to sell products/services to target such as customers such as blogs, personal websites, e-commerce portals, exhibitions, stalls, etc.
- PC7.** identify different sources of loans/funds and the formalities to raise the same
- PC8.** understand basic government rules and regulations specific to the region and including registering a company
- PC9.** determine the amount of manpower required to run an enterprise for delivering products/services

Setting up and managing a micro-enterprise

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

- PC10.** deal effectively with all the stakeholders such as vendors, customers, suppliers etc
- PC11.** assure and maintain quality of products and services delivered
- PC12.** effectively manage the employees in the enterprise
- PC13.** do primary accounting and effectively manage money

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** decision making on products/services to be delivered by the enterprise
- KU2.** methods and importance of market survey
- KU3.** methods and importance of consulting with experts
- KU4.** acquire knowledge on basic communication, management, accounting, marketing skills and basic IPR and tax laws applicable to one's trade

- KU5.** basic computer skills such as document editing, making presentations and managing worksheets
- KU6.** understand and comply with Tax and wage laws as applicable to a business
- KU7.** record keeping as per statutory requirements
- KU8.** maintain an inventory of all raw materials, finished products, stock distribution
- KU9.** types of patents and ownership issues

Generic Skills (GS)

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

- GS1.** note the information to be communicated
- GS2.** fill relevant applications where required
- GS3.** document processes
- GS4.** write clear communications to government officials, funding partners, team members, etc.
- GS5.** discuss task lists, schedules and activities with customers, peers, partners, vendors etc.
- GS6.** effectively communicate with teams
- GS7.** interact with successful local entrepreneurs, and enterprises in a similar field for best practices and expertise.
- GS8.** ask questions in order to understand problems and clarify queries
- GS9.** actively listen and comprehend information
- GS10.** plan and organize work
- GS11.** plan and allot work/responsibilities to employees or team members
- GS12.** organize material and digital resources for enterprise
- GS13.** prioritize work based on enterprise needs
- GS14.** prioritize work based on customer/market requirement
- GS15.** plan to utilize the time and equipment effectively

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Evaluating an opportunity before starting a microenterprise</i>	25	48	-	-
PC1. identify gaps in markets for different products/services	2	3	-	-
PC2. identify the customer needs for different products/services	3	7	-	-
PC3. identify different features of products/services to be marketed	3	7	-	-
PC4. identify the cheap and regular sources of supply for raw materials	3	7	-	-
PC5. determine the pricing of the products depending upon competitive businesses	3	4	-	-
PC6. identify various mediums (online/offline) to sell products/services to target such as customers such as blogs, personal websites, e-commerce portals, exhibitions, stalls, etc.	2	5	-	-
PC7. identify different sources of loans/funds and the formalities to raise the same	3	4	-	-
PC8. understand basic government rules and regulations specific to the region and including registering a company	4	6	-	-
PC9. determine the amount of manpower required to run an enterprise for delivering products/services	2	5	-	-
<i>Setting up and managing a micro-enterprise</i>	10	17	-	-
PC10. deal effectively with all the stakeholders such as vendors, customers, suppliers etc	3	4	-	-
PC11. assure and maintain quality of products and services delivered	2	5	-	-
PC12. effectively manage the employees in the enterprise	3	3	-	-
PC13. do primary accounting and effectively manage money	2	5	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	35	65	-	-

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N3152
NOS Name	Developing entrepreneurial skills
Sector	Electronics
Sub-Sector	Generic
Occupation	After Sales Service
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/12/2021
Next Review Date	30/12/2026
NSQC Clearance Date	30/12/2021

ELE/N9905: Work effectively at the workplace

Description

This unit is about the communicating and managing work effectively at the workplace as well as taking measures to enhance own competence and working in a disciplined and ethical manner.

Scope

The scope covers the following :

- Communicate effectively at the workplace
- Work effectively
- Maintain and enhance professional competence
- Work in a disciplined and ethical manner
- Uphold social diversity at the workplace

Elements and Performance Criteria

Communicate effectively at the workplace

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

- PC1.** exchange information and instruction with colleagues, and seek clarifications and feedback as necessary
- PC2.** assist colleagues where required
- PC3.** follow business communication etiquette in all interactions and communicative formats (online, digital, and in-person)
- PC4.** document and share all relevant information with stakeholders in agreed formats and as per agreed timelines

Work effectively

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

- PC5.** identify and obtain clarity regarding organisational, team and own goals and targets
- PC6.** prioritise and plan work in order to achieve goals and targets
- PC7.** monitor own and team performance as per agreed plan
- PC8.** complete duties accurately, systematically and within required timeframes
- PC9.** express emotions appropriately at the workplace and manage own response to heightened emotions
- PC10.** maintain orderliness and cleanliness in the work area

Maintain and enhance professional competence

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

- PC11.** identify own strengths and weaknesses in relation to goals and targets
- PC12.** adapt self, service, or product to meet success criteria
- PC13.** seek and select opportunities for continuous professional development
- PC14.** formulate a professional development plan to enhance capabilities
- PC15.** build or contribute to the organizational knowledge base of cases, clients, issues, solutions, and innovations

PC16. examine developments and trends in field of work and their potential impact on work

PC17. take feedback from peers, supervisors and clients to improve own performance and practices

Work in a disciplined and ethical manner

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

PC18. perform tasks as per workplace standards, organisational policies and legislative requirements

PC19. display appropriate professional appearance at the workplace and adhere to the organisational dress code

PC20. demonstrate responsible and disciplined behaviour at the workplace such as punctuality; completing tasks as per given time and standards; demonstrating professional behaviour at all times, adopting environment- friendly practices, etc.

PC21. identify the cause of conflict and options for resolution with peers or escalate grievances and problems to appropriate authority as per procedure for conflict resolution

PC22. protect the rights of the client and organisation when delivering services

PC23. ensure services are delivered equally to all clients regardless of personal and cultural beliefs

PC24. operate within an agreed ethical code of practice and report unethical conduct to the appropriate authorities

PC25. follow organisational guidelines and legal requirements on disclosure and confidentiality

Uphold social diversity at the workplace

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

PC26. recognize and evaluate biased practices against underrepresented groups like women and persons with disabilities, in workplace systems and processes

PC27. identify and report discrimination and harassment based on gender, disability, or cultural difference at the workplace

PC28. use inclusive or neutral language and gestures in all interactions

PC29. respect the personal and professional space of others

PC30. access grievance redressal mechanisms as per legislations

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. organisation's policies on dress code, workplace timings, workplace behaviour, performance management, incentives, delivery standards, information security, etc.

KU2. organizational hierarchy and escalation matrix

KU3. importance of the individual's role in the workflow

KU4. organisational norms on health, safety and sustainability

KU5. work area inspection procedures and practices

KU6. professional etiquette and grooming

KU7. communication etiquette across communicative mediums (online, digital, and in-person) including strategies/methods for sharing information, documentation, and providing and receiving feedback

KU8. importance of self-evaluations and developing a continuous learning and professional development plan

- KU9.** developments and trends impacting professional practice
- KU10.** importance of taking and using feedback from colleagues and clients to identify and introduce improvements in work performance
- KU11.** professional ethics and workplace norms on reporting and/or penalizing unethical behaviour and practices.
- KU12.** guidelines and legal requirements on disclosure, confidentiality, and conflicts of interest
- KU13.** strategies for collaboration with colleagues and clients.
- KU14.** professional responses and strategies against inappropriate language or behaviour toward self and others
- KU15.** Implicit bias (based on gender, disability, class, caste, colour, race, culture, religion, etc.) and its consequences in the workplace
- KU16.** organizational guidelines, prevalent legislations and accessibility norms and processes to support PwDs at the workplace
- KU17.** strategies for time, effort and resource allocation towards the goals.
- KU18.** basic concepts of work productivity including waste reduction, efficient material usage and optimization of time

Generic Skills (GS)

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

- GS1.** complete documentation and forms such as work orders, invoices maintenance records activity logs, attendance sheets as per organizational format in English and/or local language
- GS2.** write basic accident or incident report accurately in an appropriate format
- GS3.** read warnings, instructions and other text material on product labels, components, etc. and relevant signages, warnings, labels or descriptions on equipment, etc. while carrying out work activities
- GS4.** convey and share technical information clearly using appropriate language
- GS5.** clarify task-related information
- GS6.** liaise with authorities and supervisors as per organizational protocol
- GS7.** listen, speak, and write in an inclusive, respectful manner in line with organizational protocol
- GS8.** seek clarification from immediate supervisor or responsible authority or exercise most appropriate solutions to safety breaches at work
- GS9.** report to the supervisor and when to deal with a colleague depending on the type of concern
- GS10.** deliver product to next work process on time
- GS11.** improve work process and report potential areas of delays and disruptions
- GS12.** communicate problems appropriately to others
- GS13.** identify symptoms of the fault to the cause of the problem and resolve, otherwise seek assistance and support from other sources to solve the problem
- GS14.** anticipate and avoid hazards that may occur during repairs because of tools, materials used or repair processes
- GS15.** complete tasks efficiently and accurately within stipulated time
- GS16.** appreciate and respect social diversity in all professional settings
- GS17.** develop awareness and accountability for perspectives on gender, disabilities, and socio-cultural issues leading to discrimination, bias, or harassment at the workplace

GS18. maintain positive and effective relationships with colleagues and customers

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Communicate effectively at the workplace</i>	5	13	-	-
PC1. exchange information and instruction with colleagues, and seek clarifications and feedback as necessary	1	3	-	-
PC2. assist colleagues where required	1	3	-	-
PC3. follow business communication etiquette in all interactions and communicative formats (online, digital, and in-person)	1	4	-	-
PC4. document and share all relevant information with stakeholders in agreed formats and as per agreed timelines	2	3	-	-
<i>Work effectively</i>	6	13	-	-
PC5. identify and obtain clarity regarding organisational, team and own goals and targets	1	2	-	-
PC6. prioritise and plan work in order to achieve goals and targets	1	2	-	-
PC7. monitor own and team performance as per agreed plan	1	2	-	-
PC8. complete duties accurately, systematically and within required timeframes	1	2	-	-
PC9. express emotions appropriately at the workplace and manage own response to heightened emotions	1	2	-	-
PC10. maintain orderliness and cleanliness in the work area	1	3	-	-
<i>Maintain and enhance professional competence</i>	8	7	-	-
PC11. identify own strengths and weaknesses in relation to goals and targets	1	1	-	-
PC12. adapt self, service, or product to meet success criteria	1	1	-	-
PC13. seek and select opportunities for continuous professional development	1	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. formulate a professional development plan to enhance capabilities	2	1	-	-
PC15. build or contribute to the organizational knowledge base of cases, clients, issues, solutions, and innovations	1	1	-	-
PC16. examine developments and trends in field of work and their potential impact on work	1	1	-	-
PC17. take feedback from peers, supervisors and clients to improve own performance and practices	1	1	-	-
<i>Work in a disciplined and ethical manner</i>	11	16	-	-
PC18. perform tasks as per workplace standards, organisational policies and legislative requirements	2	2	-	-
PC19. display appropriate professional appearance at the workplace and adhere to the organisational dress code	1	2	-	-
PC20. demonstrate responsible and disciplined behaviour at the workplace such as punctuality; completing tasks as per given time and standards; demonstrating professional behaviour at all times, adopting environment- friendly practices, etc.	1	2	-	-
PC21. identify the cause of conflict and options for resolution with peers or escalate grievances and problems to appropriate authority as per procedure for conflict resolution	2	2	-	-
PC22. protect the rights of the client and organisation when delivering services	1	2	-	-
PC23. ensure services are delivered equally to all clients regardless of personal and cultural beliefs	1	2	-	-
PC24. operate within an agreed ethical code of practice and report unethical conduct to the appropriate authorities	2	2	-	-
PC25. follow organisational guidelines and legal requirements on disclosure and confidentiality	1	2	-	-
<i>Uphold social diversity at the workplace</i>	10	11	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC26. recognize and evaluate biased practices against underrepresented groups like women and persons with disabilities, in workplace systems and processes	2	2	-	-
PC27. identify and report discrimination and harassment based on gender, disability, or cultural difference at the workplace	2	2	-	-
PC28. use inclusive or neutral language and gestures in all interactions	2	2	-	-
PC29. respect the personal and professional space of others	2	2	-	-
PC30. access grievance redressal mechanisms as per legislations	2	3	-	-
NOS Total	40	60	-	-

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N9905
NOS Name	Work effectively at the workplace
Sector	Electronics
Sub-Sector	Generic
Occupation	Generic - Organizational Behaviour
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	24/02/2022
Next Review Date	30/12/2026
NSQC Clearance Date	30/12/2021

ELE/N1002: Apply health and safety practices at the workplace

Description

This OS unit is about knowledge and practices relating to health, safety and security that candidates need to use in the workplace.

Scope

The scope covers the following :

- Deal with workplace hazards
- Apply fire safety practices
- Follow emergencies, rescue and first-aid procedures
- Effective waste management/recycling practices

Elements and Performance Criteria

Deal with workplace hazards

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

- PC1.** identify job-site hazards and possible causes of accident in the workplace
- PC2.** perform work complying to organizational safe working practices and observing hazard signs displayed on containers, equipment and in various work areas such as inside buildings, in open areas and public spaces, etc.
- PC3.** use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards
- PC4.** follow standard safety procedures while handling tool/ ,equipment, hazardous substances and while working in hazardous environments
- PC5.** dispose electronic waste (such as toxins; metals such as lead, cadmium, barium; flame retardant plastics, welding slag etc.) as per industry approved techniques
- PC6.** avoid damage of components due to negligence in electrostatic discharge (ESD) procedures
- PC7.** locate general health and safety equipment in the workplace such as fire extinguishers; first aid equipment; safety instruments, clothing and installations (fire exits, exhaust fans)
- PC8.** maintain appropriate posture while handling heavy objects
- PC9.** apply good housekeeping practices at all times

Apply fire safety practices

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

- PC10.** take preventive measures to prevent fire hazards
- PC11.**
 - use appropriate fire extinguishers for different types of fires
 - Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. (These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no I
- PC12.** exhibit rescue and first-aid techniques in case of fire or electrocution

Follow emergencies, rescue and first-aid procedures

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

- PC13.** administer appropriate first aid to victims in case of bleeding, burns, choking, electric shock, poisoning etc.
- PC14.** administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock,
- PC15.** participate regularly in emergency procedures such as raising alarm, safe/efficient, evacuation, correct means of taking shelter and escaping, correct assembly point, roll call, correct return to work
- PC16.** use correct method to move injured people and others during an emergency

Effective waste management/recycling practices

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

- PC17.** identify recyclable and non-recyclable, and hazardous waste generated
- PC18.** segregate waste into different categories
- PC19.** ensure disposal of non-recyclable waste appropriately
- PC20.** deposit non-recyclable and reusable material at identified location
- PC21.** follow processes specified for disposal of hazardous waste

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** importance of working in clean and safe work environment following safety practices and procedures
- KU2.** health and safety roles and responsibilities of relevant personnel within and outside the organisation
- KU3.** key internal and external sources of health and safety information
- KU4.** basic knowledge of electronic devices and related health risks
- KU5.** meaning of hazards and risks
- KU6.** various types of health and safety hazards commonly present in the work environment such as physical hazards, electrical hazards, chemical hazards, fire hazards, equipment related hazards, health hazards, etc.
- KU7.** methods of accident prevention
- KU8.** importance of using protective clothing/equipment while working
- KU9.** general principles for identifying and controlling health and safety risks
- KU10.** main hazards and preventive as well as control measures while working with different types of equipment
- KU11.** importance of carrying out electrical and non-electrical isolation to prevent hazards from loss of machine/system/process control
- KU12.** main hazards and preventive as well as control measures when working with electrical systems or using electrical equipment
- KU13.** forms and classifications of hazardous substances
- KU14.** safe working practices while working at various hazardous sites
- KU15.** prevention and control measures to reduce risks from exposure to hazardous substances
- KU16.** health effects associated with exposure to noise and vibration and the appropriate control measures

- KU17.** precautionary activities to prevent the fire accident
- KU18.** various causes of fire such as heating of metal, spontaneous ignition, sparking, electrical eating, loose fires (smoking, welding, etc.) chemical fires etc.
- KU19.** techniques of using the different fire extinguishers
- KU20.** different methods and material to extinguish fires
- KU21.** different materials used for extinguishing fire such as sand, water, foam, CO2, dry powder
- KU22.** rescue techniques used during a fire hazard
- KU23.** various types of safety signs and their meaning
- KU24.** basic first aid treatment relevant to the common work place injuries e.g. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries
- KU25.** contents of written accident report
- KU26.** potential injuries and ill health associated with incorrect handling of tools and equipment
- KU27.** safe lifting and carrying practices
- KU28.** potential impact to a person who is moved incorrectly
- KU29.** personal safety, health and dignity issues relating to the movement of a person by others
- KU30.** ESD measures and 5S
- KU31.** efficient utilization and management of material and water
- KU32.** ways to recognize common electrical problems and practices of conserving electricity
- KU33.** usage of different colours of dustbins, categorization of waste into dry, wet, recyclable, nonrecyclable and items of single-use plastics
- KU34.** organization's procedure for minimizing waste
- KU35.** waste management and methods of waste disposal
- KU36.** common sources of pollution and ways to minimize it
- KU37.** names, contact information and location of people responsible for health and safety in the workplace
- KU38.** location of documents and equipment for health and safety compliance/practices in the workplace
- KU39.** safety notices, signs and instructions at workplace

Generic Skills (GS)

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

- GS1.** interpret general health and safety guidelines labels, charts, signages
- GS2.** read operation manuals
- GS3.** write health and safety compliance report
- GS4.** write an accident/incident report in local language or English
- GS5.** provide an emergency or safety incident brief to seniors or relevant authorities in a calm, clear and to-the-point manner
- GS6.** communicate general health and safety guidelines to colleagues/co-workers
- GS7.** communicate appropriately with co-workers in order to clarify instructions and other issues
- GS8.** act in case of any potential hazards observed in the work place

- GS9.** plan and organize their own work schedule, work area, tools, equipment in compliance with organizational policies for health, safety and security
- GS10.** take adequate measures to ensure the safety of clients and visitors at the workplace
- GS11.** identify immediate or temporary solutions to resolve delays
- GS12.** evaluate the work area for health and safety risks or hazards
- GS13.** use cause and effect relations to anticipate potential issues, problems and their solution in the work area related to safety
- GS14.** recognise emergency and potential emergency situations
- GS15.** protect self and others from a health and safety risk or hazard
- GS16.** communicate and collaborate to incorporate sustainable practices (greening) in workplace processes
- GS17.** record data on waste disposal at workplace

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Deal with workplace hazards</i>	20	31	-	-
PC1. identify job-site hazards and possible causes of accident in the workplace	2	3	-	-
PC2. perform work complying to organizational safe working practices and observing hazard signs displayed on containers, equipment and in various work areas such as inside buildings, in open areas and public spaces, etc.	3	4	-	-
PC3. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	3	4	-	-
PC4. follow standard safety procedures while handling tool/ ,equipment, hazardous substances and while working in hazardous environments	3	4	-	-
PC5. dispose electronic waste (such as toxins; metals such as lead, cadmium, barium; flame retardant plastics, welding slag etc.) as per industry approved techniques	2	4	-	-
PC6. avoid damage of components due to negligence in electrostatic discharge (ESD) procedures	2	3	-	-
PC7. locate general health and safety equipment in the workplace such as fire extinguishers; first aid equipment; safety instruments, clothing and installations (fire exits, exhaust fans)	2	3	-	-
PC8. maintain appropriate posture while handling heavy objects	1	3	-	-
PC9. apply good housekeeping practices at all times	2	3	-	-
<i>Apply fire safety practices</i>	4	9	-	-
PC10. take preventive measures to prevent fire hazards	2	3	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. <ul style="list-style-type: none"> • use appropriate fire extinguishers for different types of fires • Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. (These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no I 	1	3	-	-
PC12. exhibit rescue and first-aid techniques in case of fire or electrocution	1	3	-	-
<i>Follow emergencies, rescue and first-aid procedures</i>	6	13	-	-
PC13. administer appropriate first aid to victims in case of bleeding, burns, choking, electric shock, poisoning etc.	1	3	-	-
PC14. administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock,	1	2	-	-
PC15. participate regularly in emergency procedures such as raising alarm, safe/efficient, evacuation, correct means of taking shelter and escaping, correct assembly point, roll call, correct return to work	2	4	-	-
PC16. use correct method to move injured people and others during an emergency	2	4	-	-
<i>Effective waste management/recycling practices</i>	5	12	-	-
PC17. identify recyclable and non-recyclable, and hazardous waste generated	1	3	-	-
PC18. segregate waste into different categories	1	2	-	-
PC19. ensure disposal of non-recyclable waste appropriately	1	2	-	-
PC20. deposit non-recyclable and reusable material at identified location	1	3	-	-
PC21. follow processes specified for disposal of hazardous waste	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	35	65	-	-

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N1002
NOS Name	Apply health and safety practices at the workplace
Sector	Electronics
Sub-Sector	Generic
Occupation	Generic - Health Safety
NSQF Level	4
Credits	TBD
Version	3.0
Last Reviewed Date	24/02/2022
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

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/N3147.Engage with the Customers for Service	40	50	-	10	100	10
ELE/N3148.Diagnose and repair faults in LED light	40	50	-	10	100	15
ELE/N3149.Diagnose and fix faults in geyser and fans	40	50	-	10	100	15
ELE/N3150.Install new and repair dysfunctional water purifiers	40	50	-	10	100	15
ELE/N3151.Repairing dysfunctional mixer/juicer/grinder	40	50	-	10	100	15
ELE/N3152.Developing entrepreneurial skills	35	65	-	-	100	10
ELE/N9905.Work effectively at the workplace	40	60	-	-	100	10
ELE/N1002.Apply health and safety practices at the workplace	35	65	-	-	100	10
Total	310	440	-	-	800	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.