Qualification Pack

Field Technician-UPS And Inverter

QP Code: ELE/Q7201

Version: 3.0

NSQF Level: 4

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Contents

ELE/Q7201: Field Technician-UPS And Inverter

Brief Job Description

The individual at work installs the newly purchased UPS or inverter and interacts with customers to diagnose the problems, assess possible causes, rectify faults or replace faulty modules or recommends factory repairs for bigger faults.

Personal Attributes

The individual must have communication, patience, logical thinking, problem solving skills. The person is also required to lift heavy objects.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. ELE/N0061: Understand requirement of customer

2. ELE/N7201: Install the UPS/ Inverter

3. ELE/N7202: Repair dysfunctional UPS/ Inverter

4. ELE/N9905: Work effectively at the workplace

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

6. DGT/VSQ/N0102: Employability Skills (60 Hours)

Qualification Pack (QP) Parameters

Sector	Electronics
Sub-Sector	Industrial Automation
Occupation	Sales and After Sales Service
Country	India
NSQF Level	4
Credits	20
Aligned to NCO/ISCO/ISIC Code	NCO-2004/7243.10

Minimum Educational Qualification & Experience	8th grade pass with 2 years of NTC (plus 2 year NAC/relevant experience) OR 10th grade pass (plus 2 year of NTC/NAC/relevant experience)
Minimum Level of Education for Training in School	8th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	27/06/2025
NSQC Approval Date	27/01/2022
Version	3.0
Reference code on NQR	2022/EHW/ESSC/06666
NQR Version	1.0

Remarks:

NA

ELE/N0061: Understand requirement of customer

Description

This OS unit is about interacting with customer to understand their requirement with respect to problem in the appliance.

Scope

The scope covers the following :

- Interact with the customer prior to visit
- Interact with customer at their premises
- Achieve productivity and quality as per organization's norms

Elements and Performance Criteria

Interact with customer prior to visit

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

PC1. check customer complaint registered at customer care or installation schedule

PC2. make a call to customer to confirm problem and schedule the time for visit

PC3. exchange greetings with the customer and confirm the problem registered

PC4. ensure polite interaction with customer

PC5. check the warranty status and annual maintenance contract of appliance

PC6. anticipate possible problems to carry tools and parts accordingly

PC7. ascertain customer's location in order to make the route plan for the day

Interact with customer at their premises

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

PC8. enquire about the issues and history of problems in the appliance

PC9. enquire about the age of appliance and status of upkeep

PC10. identify the problem based on customer's information

PC11. discuss about the problems as well as the possible reasons

PC12. inform about costs involved

Suggest possible solutions to customer

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

PC13. suggest possible solutions of the problems identified

PC14. explain the methodology for servicing and specify the time required for

PC15. provide customer's approval on further action

Achieve productivity and quality as per company's norms

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

PC16. ensure accurate assessment of the problem and necessary solution(s)

PC17. propose most appropriate and cost-effective service as per customer's requirement

PC18. convey problem confidently so that customer can rely on

PC19. ensure 100% customer satisfaction and positive feedback

PC20. ensure zero customer complaints post service

PC21. ensure zero repeat of same problem post service

PC22. prepare most optimum route plan to complete daily target visits

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. companys policies on: customer care, warranty

KU2. companys code of conduct

KU3. organisation culture and typical customer profile

KU4. companys reporting structure

KU5. companys documentation policy

KU6. companys products and recurring problems reported in consumer appliances

KU7. basic electrical and mechanical modules of various industrial electronic products

KU8. circuit design of the type and model of product

KU9. etiquette to be followed at customers premises

KU10. precautions to be taken while handling field calls and dealing with customers

KU11. relevant reference sheets, manuals and documents to carry in the field

KU12. importance of maintaining clean surface/work area

KU13. significance of etiquette such as maintaining the appropriate physical distance with customer during conversation, not entering bedroom without permission

Generic Skills (GS)

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

GS1. use computers for documenting

GS2. complete forms such as work orders, invoices, maintenance records

GS3. note problems on job sheet and details of work done

GS4. read warnings, instructions and other text material on product labels, components, etc

GS5. read job sheets or work orders

GS6. read product and module serial numbers and interpret details such as make, date, availability

GS7. receive and ask for clarifications from supervisor on the job requirement

GS8. communicate in local language

GS9. educate and inform customer about contractual issues such as warranty, cost of service and module replacement

GS10. be polite and courteous under all circumstances

GS11. follow standard operating procedures while making decisions

GS12. take approval from supervisor in case the decision has to be made for exceptions

GS13. work with supervisor and co-workers to achieve smooth workflow

GS14. work with superiors and co-workers to share knowledge and learning

GS15. ensure quality standards and standard operating procedures are maintained

GS16. ensure that the finished assembly meets specifications

GS17. importance of personal grooming

GS18. be patient and courteous with all types of customers

GS19. assemble together various control boards and other electronic components in order to obtain the electrical sub system

GS20. achieve the required quality and meet overall quality standards

GS21. seek inputs to assess the problems

GS22. educate on precautions to be taken post repairs to avoid recurrence of problem

GS23. interpret accurately drawings, wiring and job specifications/instructions

GS24. improve work processes

GS25. reduce repetition of errors

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Interact with customer prior to visit	**5**	**15**	**-**	**-**
PC1. check customer complaint registered at customer care or installation schedule	2	3	-	-
PC2. make a call to customer to confirm problem and schedule the time for visit	1	5	-	-
PC3. exchange greetings with the customer and confirm the problem registered	1	2	-	-
PC4. ensure polite interaction with customer	1	2	-	-
PC5. check the warranty status and annual maintenance contract of appliance	-	1	-	-
PC6. anticipate possible problems to carry tools and parts accordingly	-	1	-	-
PC7. ascertain customer's location in order to make the route plan for the day	-	1	-	-
Interact with customer at their premises	**15**	**15**	**-**	**-**
PC8. enquire about the issues and history of problems in the appliance	3	4	-	-
PC9. enquire about the age of appliance and status of upkeep	3	3	-	-
PC10. identify the problem based on customer's information	3	2	-	-
PC11. discuss about the problems as well as the possible reasons	3	3	-	-
PC12. inform about costs involved	3	3	-	-
Suggest possible solutions to customer	**15**	**15**	**-**	**-**
PC13. suggest possible solutions of the problems identified	5	5	-	-
PC14. explain the methodology for servicing and specify the time required for	5	4	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. provide customer's approval on further action	5	6	-	-
Achieve productivity and quality as per company's norms	**5**	**15**	**-**	**-**
PC16. ensure accurate assessment of the problem and necessary solution(s)	1	3	-	-
PC17. propose most appropriate and cost-effective service as per customer's requirement	1	2	-	-
PC18. convey problem confidently so that customer can rely on	1	2	-	-
PC19. ensure 100% customer satisfaction and positive feedback	1	2	-	-
PC20. ensure zero customer complaints post service	1	2	-	-
PC21. ensure zero repeat of same problem post service	-	2	-	-
PC22. prepare most optimum route plan to complete daily target visits	-	2	-	-
NOS Total	**40**	**60**	**-**	**-**

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N0061
NOS Name	Understand requirement of customer
Sector	Electronics
Sub-Sector	Industrial Automation
Occupation	Sales and After Sales Service
NSQF Level	4
Credits	TBD
Version	3.0
Last Reviewed Date	27/01/2022
Next Review Date	27/06/2025
NSQC Clearance Date	27/01/2022

ELE/N7201: Install the UPS/ Inverter

Description

This OS unit is about installing the newly purchased UPS/Inverter at customers location and make it ready to use.

Scope

The scope covers the following :

- Undertake pre-installation site visit
- Check accessories
- Place and wire the UPS/Inverter
- Check functioning of the product
- Complete the documentation
- Interact with supervisor/superior
- Achieve productivity and quality as per organization's norms

Elements and Performance Criteria

Undertake preinstallation site visit

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

PC1. visit the customer's premise before carrying out the installation

PC2. interact with customer to understand where the UPS/inverter is to be installed

PC3. check whether the location meets structural requirements such as solid floor surface suitable for wheeling and heavy weight, weight and clearance requirements, etc.

PC4. carry out pre-installations/masonry/electrical work to be carried out

PC5. educate customer about keeping the equipment protected from moisture

PC6. request appointment for the next visit

Check accessories

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

PC7. check that the product matches with the customer order in terms of color and model

PC8. ensure that the original packaging is retained if the UPS is to be installed later

PC9. check all supporting accessories purchased are there in the pack

PC10. ensure that there is no sign of shipping damages

PC11. check whether the required tools and fitments are available for the installation

PC12. clear up the packaging material waste and dispose as per company's norms

PC13. remove watches, rings or any other metal objects before installation procedure

Place the UPS/Inverter at identified location

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

PC14. check whether pre-installation requirements are met

PC15. ensure that the room in which the UPS is installed is well ventilated and that there is no flammable gas in the environment around

PC16. maintain minimum space needed for ventilation and service

PC17. detach all bolts and shipping brackets and separate the UPS cabinet

PC18. place the UPS at the final location, then connect the power and control wirings through the top or bottom of the cabinet

PC19. follow standard wiring procedure while carrying out the electrical installation

PC20. reinstall safety shields removed during the process of installation

Check functioning of the product

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

PC21. align the UPS/inverter as per the instruction manual, once necessary power and control connections are made

PC22. demonstrate the features and utility

PC23. explain the precautions to be taken while using the air conditioner

Complete the documentation

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

PC24. fill in customer acknowledgement form

PC25. provide customer's signature

PC26. complete other documentation needed for the record of completion of installation

PC27. call customer care and inform that the job is done

Interact with supervisor or superior

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

PC28. interact time to time with the superior for understanding the work requirement

PC29. inform the superior about the work completion

PC30. escalate the customer issues and problems that are unresolved in the field

PC31. document the work completed on the company ERP software for tracking and future references

Achieve productivity and quality as per company's norms

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

PC32. ensure no damage of the UPS/Inverter while removal of packaging

PC33. place the equipment as per requirements specified in instructions manual

PC34. educate customer on importance of proper placing

PC35. carry and use the correct tools and equipment for installation

PC36. operate and check that they are in a safe and stable condition

PC37. complete the installation within the given time limit

PC38. educate customer on proper operation and maintenance procedures

PC39. complete daily field schedule as per instructions/format within the designated time

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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

KU2. companys sales, installation and after sales support policy

KU3. importance of the individuals role in the workflow

KU4. reporting structure

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

KU6. installation site requirements (structural requirements, ventilation, etc.)

KU7. different features and functionalities of various models

KU8. fundamentals of electricity, electrical components and electrical schematic symbols

KU9. safety precautions to be taken while installing such as wearing rubber gloves, removing metals objects from the surroundings etc.

KU10. manual-based procedure of installing the UPS/inverter

KU11. packaging waste disposal procedures

KU12. use of test equipment and tools such as multi-meter, oscilloscope

KU13. safety rules, policies and procedures

KU14. quality standards to be followed

KU15. equipment works

KU16. operations, setting and uses of UPS/inverter and its uses

KU17. various accessories and parts that have accompanied the unit

KU18. features and functionalities after the installation of UPS/inverter

KU19. tools for installation like screw drivers

KU20. appropriate settings after plugging in

Generic Skills (GS)

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

GS1. use computers for documenting

GS2. complete forms such as work orders, invoices, maintenance records

GS3. document the completed work

GS4. read warnings, instructions and other text material on product labels, components, etc

GS5. read job sheets or work orders

GS6. read job sheet for installation as registered by customer care/ companys ERP system

GS7. read the standard operating procedures for different types of UPS/inverters

GS8. receive and ask for clarifications from supervisor on the job requirement

GS9. follow standard operating procedures while making decisions

GS10. take approval from supervisor in case the decision has to be made for exceptions

GS11. deliver product to next work process on time

GS12. share work load as required

GS13. achieve the targets given on installation per day or month

GS14. escalate customer concerns that cannot be handled on field to theappropriate authority

GS15. report potential areas of disruptions to work process

GS16. report to supervisor and when to deal with a colleague depending on the type of concern

GS17. reduce repetition of errors in installation

GS18. spot process disruptions and delays

GS19. improve work process

GS20. report customer concerns to superiors without delay

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Undertake preinstallation site visit	**5**	**10**	**-**	**-**
PC1. visit the customer's premise before carrying out the installation	1	1	-	-
PC2. interact with customer to understand where the UPS/inverter is to be installed	1	1	-	-
PC3. check whether the location meets structural requirements such as solid floor surface suitable for wheeling and heavy weight, weight and clearance requirements, etc.	1	2	-	-
PC4. carry out pre-installations/masonry/electrical work to be carried out	1	2	-	-
PC5. educate customer about keeping the equipment protected from moisture	1	2	-	-
PC6. request appointment for the next visit	-	2	-	-
Check accessories	**5**	**10**	**-**	**-**
PC7. check that the product matches with the customer order in terms of color and model	1	1	-	-
PC8. ensure that the original packaging is retained if the UPS is to be installed later	1	1	-	-
PC9. check all supporting accessories purchased are there in the pack	1	1	-	-
PC10. ensure that there is no sign of shipping damages	1	1	-	-
PC11. check whether the required tools and fitments are available for the installation	1	2	-	-
PC12. clear up the packaging material waste and dispose as per company's norms	-	2	-	-
PC13. remove watches, rings or any other metal objects before installation procedure	-	2	-	-
Place the UPS/Inverter at identified location	**5**	**10**	**-**	**-**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. check whether pre-installation requirements are met	1	2	-	-
PC15. ensure that the room in which the UPS is installed is well ventilated and that there is no flammable gas in the environment around	1	2	-	-
PC16. maintain minimum space needed for ventilation and service	1	2	-	-
PC17. detach all bolts and shipping brackets and separate the UPS cabinet	1	1	-	-
PC18. place the UPS at the final location, then connect the power and control wirings through the top or bottom of the cabinet	-	1	-	-
PC19. follow standard wiring procedure while carrying out the electrical installation	1	1	-	-
PC20. reinstall safety shields removed during the process of installation	-	1	-	-
Check functioning of the product	**5**	**5**	**-**	**-**
PC21. align the UPS/inverter as per the instruction manual, once necessary power and control connections are made	1	2	-	-
PC22. demonstrate the features and utility	2	2	-	-
PC23. explain the precautions to be taken while using the air conditioner	2	1	-	-
Complete the documentation	**5**	**10**	**-**	**-**
PC24. fill in customer acknowledgement form	1	2	-	-
PC25. provide customer's signature	1	2	-	-
PC26. complete other documentation needed for the record of completion of installation	1	3	-	-
PC27. call customer care and inform that the job is done	2	3	-	-
Interact with supervisor or superior	**5**	**5**	**-**	**-**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC28. interact time to time with the superior for understanding the work requirement	1	1	-	-
PC29. inform the superior about the work completion	1	2	-	-
PC30. escalate the customer issues and problems that are unresolved in the field	2	1	-	-
PC31. document the work completed on the company ERP software for tracking and future references	1	1	-	-
Achieve productivity and quality as per company's norms	**10**	**10**	**-**	**-**
PC32. ensure no damage of the UPS/Inverter while removal of packaging	2	1	-	-
PC33. place the equipment as per requirements specified in instructions manual	2	1	-	-
PC34. educate customer on importance of proper placing	1	2	-	-
PC35. carry and use the correct tools and equipment for installation	1	2	-	-
PC36. operate and check that they are in a safe and stable condition	1	1	-	-
PC37. complete the installation within the given time limit	1	1	-	-
PC38. educate customer on proper operation and maintenance procedures	1	1	-	-
PC39. complete daily field schedule as per instructions/format within the designated time	1	1	-	-
NOS Total	**40**	**60**	**-**	**-**

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N7201
NOS Name	Install the UPS/ Inverter
Sector	Electronics
Sub-Sector	Industrial Automation
Occupation	Sales and After Sales Service
NSQF Level	4
Credits	TBD
Version	3.0
Last Reviewed Date	27/01/2022
Next Review Date	27/06/2025
NSQC Clearance Date	27/01/2022

ELE/N7202: Repair dysfunctional UPS/ Inverter

Description

This unit is about understanding the customers complaints, identifying the fault and fixing the UPS/inverter.

Scope

The scope covers the following :

- Understand the symptoms and identify the fault
- Replace dysfunctional module in the UPS/inverter unit
- Confirm functionality of the repaired unit
- Achieve productivity and quality as per organization's norms

Elements and Performance Criteria

Understand the symptoms in the UPS/inverter and identify the fault

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

PC1.   diagnose the fault based on customer interaction and initial inspection

PC2.   disconnect the power source and open the cabinet doors of the equipment

PC3.   disconnect the battery and wait for electrolytic capacitor to discharge

PC4.   remove protective panels since the voltage present is potentially lethal

PC5.   check the air filters and monitor system parameters from the control panel

PC6.   carry out basic tests such as power supply inspection, volt ampere test and earth test power supply etc.

PC7.   separate and inspect every module of the unit if the fault is not identified through basic tests

PC8.   visit factory for in depth diagnosis, if problem remains un-identified at site

Replace dysfunctional module in the UPS/inverter unit

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

PC9.   replace component at location, if the fault identified is because of damage of components such as fuse or battery

PC10.   remove and replace the faulty module with a functional one, either on a second visit or as pre-identified and collected from the service center, if the problem is at the PCB level or components that cannot be replaced at site

Confirm functionality of the repaired unit

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

PC11.   reassemble the unit and make all power as well as communication wirings

PC12.   ensure that the unit is functioning after switching on the power supply

PC13.   check whether all the modules of the unit is working as per specifications

PC14.   demonstrate and confirm functionality of the unit with customer

PC15.   educate the customer about cleaning procedures and other best practices

PC16.   collect necessary payments from the customer, if applicable

PC17. fill in customer acknowledgement form.

PC18. complete other documentation procedures to record complaint closure

Achieve productivity and quality as per company's norms

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

PC19. ensure damage free handling of the unit

PC20. diagnose the problem accurately and in assigned time

PC21. identify the problem modules accurately such as the power supply, battery, PCB, etc.

PC22. repair the dysfunctional equipment within the designated time

PC23. ensure no repetition of the issues in the equipment

PC24. ensure minimum customer complaints post service

PC25. achieve daily target of attending the complaints

PC26. select the right spares according to recorded complaints at the customer care

PC27. inform the exact type of module requirement to the service center, if a faulty module is to be replaced

PC28. secure repairs completion receipt from customer

PC29. inform customer about the maintenance procedure and correct practices to follow in order to avoid further problems

PC30. ensure 100% customer satisfaction

PC31. receive payments as per rate sheet/communication from customer care

PC32. sell related products such as new equipment or Annual Maintenance Contracts (AMC) as per company policy Knowledge

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. companys policies on: Incentives, delivery standards and personnel management and customer service standards

KU2. reporting and documentation processes

KU3. importance of the individuals role in the system

KU4. reporting structure

KU5. functionalities of the UPS/inverter and procedures to make settings

KU6. functioning of the appliance and its various modules

KU7. UPS communication interface and wiring procedures

KU8. identification of various status indicators on the control panel of the equipment

KU9. daily, monthly and annual maintenance procedures of the equipment and battery maintenance

KU10. battery recycling procedure

KU11. basic electronics and electronic components (knowledge of components such as diode, transformer, LED, photo transistor, capacitor, resistor, inductor, thermistors)

KU12. fundamentals of electricity such as ohms law

KU13. difference between AC and DC

KU14. calculation of energy consumption of appliances

KU15. domestic wiring, series and parallel connections

KU16. troubleshooting knowledge with respect to UPS/inverters

KU17. hazards, causes and prevention/personal safety

KU18. faults such as blown fuse, dead battery, etc.

KU19. components/modules of the UPS/inverter and their prices

KU20. operations of computers and software installed

KU21. operations and use of multi-meter, oscilloscope, clamp meter, screw driver,

Generic Skills (GS)

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

GS1. complete forms such as work orders, invoices, maintenance records

GS2. fill up appropriate forms, activity logs, attendance sheets as per organizational format in English and/or local language

GS3. write basic accident or incident report as witnessed in appropriate format to relevant authority

GS4. document for customer

GS5. record completion information in the ERP system

GS6. read warnings, instructions and other text material on product labels, components, etc.

GS7. read relevant signages, warnings, labels or descriptions on equipment, etc. while carrying out work activities

GS8. read warnings, instructions and other text material on product labels, and components

GS9. read job sheet and complaints

GS10. read product operating manuals

GS11. read and understand electrical and electronic symbols, multiples and SI units

GS12. convey and share technical information clearly using appropriate language

GS13. check and clarify task-related information

GS14. liaise with appropriate authorities using correct protocol

GS15. communicate with people in respectful form and manner in line with organizational protocol

GS16. interact with customer to understand the problem faced

GS17. apply precautions and etiquette while dealing with customer

GS18. be polite, patient and punctual

GS19. seek clarification from immediate supervisor or responsible authority on how to secure safety at work when faced with difficult decisions

GS20. exercise most appropriate solutions to safety breaches at work

GS21. use basic concepts of shop-floor work productivity including waste reduction,efficient material usage and optimization of time

GS22. communicate problems appropriately to others

GS23. seek assistance and support from other sources to solve problems

GS24. follow standard operating procedures and workplace guidelines while searching for solutions to problems

GS25. detect basic electrical faults such defective power cord, connector or internal wiring defect, short/ loose/open contacts, blown fuse

GS26. identify the problem of dead battery and replacement procedure for the same

GS27. identify failure of inverter circuit or inverter driver and replace any inverter component or the inverter driver

GS28. detect defects in the cooling fan and to detect faults due to surrounding temperature being higher than allowed operation range

GS29. identify reasons for improper functioning of charger board, boost circuit, PFC components or BUS circuit and replace the identified dysfunctional module

GS30. identify failed resistors and damaged photo couplers in the IGBT driver module resulting in replacement of the module

GS31. identify fault in the charger module if the UPS works on bypass mode normally, but cannot start up completely

GS32. diagnose fault in the SPS module if the equipment does not work in spite of being connected to the input power source

GS33. match symptoms of the fault noticed to the cause of the problem

GS34. anticipate and avoid hazards that may occur during repairs because of tools, materials used or repair processes

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Understand the symptoms in the UPS/inverter and identify the fault	**10**	**10**	**-**	**-**
PC1. diagnose the fault based on customer interaction and initial inspection	1	2	-	-
PC2. disconnect the power source and open the cabinet doors of the equipment	1	2	-	-
PC3. disconnect the battery and wait for electrolytic capacitor to discharge	1	1	-	-
PC4. remove protective panels since the voltage present is potentially lethal	1	1	-	-
PC5. check the air filters and monitor system parameters from the control panel	1	1	-	-
PC6. carry out basic tests such as power supply inspection, volt ampere test and earth test power supply etc.	1	1	-	-
PC7. separate and inspect every module of the unit if the fault is not identified through basic tests	2	1	-	-
PC8. visit factory for in depth diagnosis, if problem remains un-identified at site	2	1	-	-
Replace dysfunctional module in the UPS/inverter unit	**5**	**5**	**-**	**-**
PC9. replace component at location, if the fault identified is because of damage of components such as fuse or battery	2	3	-	-
PC10. remove and replace the faulty module with a functional one, either on a second visit or as pre-identified and collected from the service center, if the problem is at the PCB level or components that cannot be replaced at site	3	2	-	-
Confirm functionality of the repaired unit	**10**	**10**	**-**	**-**
PC11. reassemble the unit and make all power as well as communication wirings	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. ensure that the unit is functioning after switching on the power supply	1	2	-	-
PC13. check whether all the modules of the unit is working as per specifications	1	1	-	-
PC14. demonstrate and confirm functionality of the unit with customer	1	1	-	-
PC15. educate the customer about cleaning procedures and other best practices	1	1	-	-
PC16. collect necessary payments from the customer, if applicable	1	1	-	-
PC17. fill in customer acknowledgement form.	2	1	-	-
PC18. complete other documentation procedures to record complaint closure	2	1	-	-
Achieve productivity and quality as per company's norms	**15**	**35**	**-**	**-**
PC19. ensure damage free handling of the unit	1	5	-	-
PC20. diagnose the problem accurately and in assigned time	1	5	-	-
PC21. identify the problem modules accurately such as the power supply, battery, PCB, etc.	1	5	-	-
PC22. repair the dysfunctional equipment within the designated time	1	5	-	-
PC23. ensure no repetition of the issues in the equipment	1	5	-	-
PC24. ensure minimum customer complaints post service	1	2	-	-
PC25. achieve daily target of attending the complaints	1	1	-	-
PC26. select the right spares according to recorded complaints at the customer care	1	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC27. inform the exact type of module requirement to the service center, if a faulty module is to be replaced	1	1	-	-
PC28. secure repairs completion receipt from customer	1	1	-	-
PC29. inform customer about the maintenance procedure and correct practices to follow in order to avoid further problems	1	1	-	-
PC30. ensure 100% customer satisfaction	1	1	-	-
PC31. receive payments as per rate sheet/communication from customer care	1	1	-	-
PC32. sell related products such as new equipment or Annual Maintenance Contracts (AMC) as per company policy Knowledge	2	1	-	-
NOS Total	**40**	**60**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	ELE/N7202
NOS Name	Repair dysfunctional UPS/ Inverter
Sector	Electronics
Sub-Sector	Industrial Automation
Occupation	Sales and After Sales Service
NSQF Level	4
Credits	TBD
Version	3.0
Last Reviewed Date	27/01/2022
Next Review Date	27/06/2025
NSQC Clearance Date	27/01/2022

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
Communicate effectively at the workplace	**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	-	-
Work effectively	**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	-	-
Maintain and enhance professional competence	**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	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. seek and select opportunities for continuous professional development	1	1	-	-
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	-	-
Work in a disciplined and ethical manner	**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	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC25. follow organisational guidelines and legal requirements on disclosure and confidentiality	1	2	-	-
Uphold social diversity at the workplace	**10**	**11**	**-**	**-**
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 l

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 handing 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
Deal with workplace hazards	**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	-	-
Apply fire safety practices	**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. • 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 l	1	3	-	-
PC12. exhibit rescue and first-aid techniques in case of fire or electrocution	1	3	-	-
Follow emergencies, rescue and first-aid procedures	**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	-	-
Effective waste management/recycling practices	**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	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC21. follow processes specified for disposal of hazardous waste	1	2	-	-
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	30/12/2026
NSQC Clearance Date	30/12/2021

Qualification Pack

DGT/VSQ/N0102: Employability Skills (60 Hours)

Description

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

Scope

The scope covers the following :

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

Elements and Performance Criteria

Introduction to Employability Skills

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

PC1. identify employability skills required for jobs in various industries

PC2. identify and explore learning and employability portals

Constitutional values – Citizenship

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

PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.

PC4. follow environmentally sustainable practices

Becoming a Professional in the 21st Century

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

PC5. recognize the significance of 21st Century Skills for employment

PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

Basic English Skills

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

PC7. use basic English for everyday conversation in different contexts, in person and over the telephone

PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English

PC9. write short messages, notes, letters, e-mails etc. in English

Career Development & Goal Setting

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

PC10. understand the difference between job and career

PC11. prepare a career development plan with short- and long-term goals, based on aptitude

Communication Skills

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

PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings

PC13. work collaboratively with others in a team

Diversity & Inclusion

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

PC14. communicate and behave appropriately with all genders and PwD

PC15. escalate any issues related to sexual harassment at workplace according to POSH Act

Financial and Legal Literacy

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

PC16. select financial institutions, products and services as per requirement

PC17. carry out offline and online financial transactions, safely and securely

PC18. identify common components of salary and compute income, expenses, taxes, investments etc

PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation

Essential Digital Skills

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

PC20. operate digital devices and carry out basic internet operations securely and safely

PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively

PC22. use basic features of word processor, spreadsheets, and presentations

Entrepreneurship

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

PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research

PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion

PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

Customer Service

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

PC26. identify different types of customers

PC27. identify and respond to customer requests and needs in a professional manner.

PC28. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC29. create a professional Curriculum vitae (Résumé)

PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively

PC31. apply to identified job openings using offline /online methods as per requirement

PC32. answer questions politely, with clarity and confidence, during recruitment and selection

PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills and different learning and employability related portals

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

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

KU5. how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up

KU6. importance of career development and setting long- and short-term goals

KU7. about effective communication

KU8. POSH Act

KU9. Gender sensitivity and inclusivity

KU10. different types of financial institutes, products, and services

KU11. how to compute income and expenditure

KU12. importance of maintaining safety and security in offline and online financial transactions

KU13. different legal rights and laws

KU14. different types of digital devices and the procedure to operate them safely and securely

KU15. how to create and operate an e- mail account and use applications such as word processors, spreadsheets etc.

KU16. how to identify business opportunities

KU17. types and needs of customers

KU18. how to apply for a job and prepare for an interview

KU19. apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

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

GS1. read and write different types of documents/instructions/correspondence

GS2. communicate effectively using appropriate language in formal and informal settings

GS3. behave politely and appropriately with all

GS4. how to work in a virtual mode

GS5. perform calculations efficiently

GS6. solve problems effectively

GS7. pay attention to details

GS8. manage time efficiently

GS9. maintain hygiene and sanitization to avoid infection

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	**1**	**1**	**-**	**-**
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
Constitutional values – Citizenship	**1**	**1**	**-**	**-**
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	**2**	**4**	**-**	**-**
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
Basic English Skills	**2**	**3**	**-**	**-**
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
Career Development & Goal Setting	**1**	**2**	**-**	**-**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
Communication Skills	**2**	**2**	**-**	**-**
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	**1**	**2**	**-**	**-**
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	**2**	**3**	**-**	**-**
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	**3**	**4**	**-**	**-**
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Entrepreneurship	**2**	**3**	**-**	**-**
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	**1**	**2**	**-**	**-**
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	**2**	**3**	**-**	**-**
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	**20**	**30**	**-**	**-**

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0102
NOS Name	Employability Skills (60 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	NA
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 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 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 centre (as per assessment criteria below).

5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criterion.

6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.

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/N0061.Understand requirement of customer	40	60	-	-	100	20
ELE/N7201.Install the UPS/ Inverter	40	60	-	-	100	25
ELE/N7202.Repair dysfunctional UPS/ Inverter	40	60	-	-	100	25
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
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	10
Total	**215**	**335**	**-**	**-**	**550**	**100**

Acronyms

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

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.
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.
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Qualification Pack

National Occupational Standard	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 (K	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 (G	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today world. These skills are typically needed in any work environment in today 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.
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