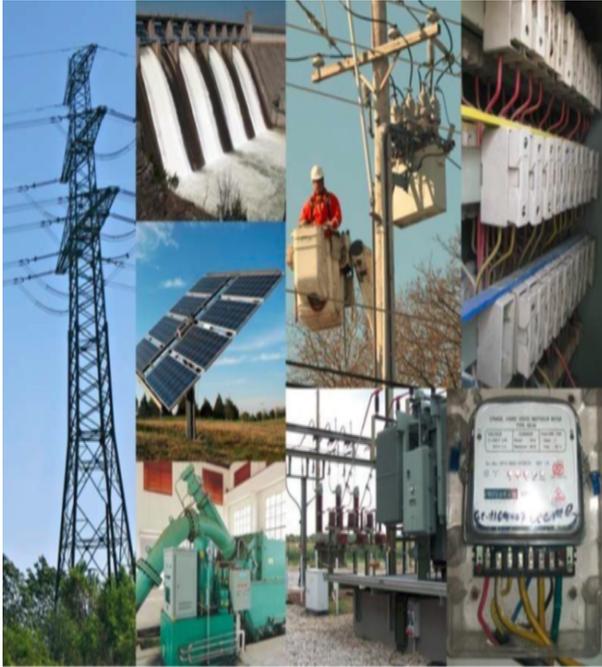




Qualification Pack



Electrician - Domestic Solutions

QP Code: PSS/Q6001

Version: 3.0

NSQF Level: 3

Power Sector Skill Council || Plot No. 4, Institutional Area, CBIP Building, Malcha Marg, Chanakyapuri
New Delhi-110021 || email: bishwajeet.singh@psscindia.org



Qualification Pack

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Qualification Pack

PSS/Q6001: Electrician - Domestic Solutions

Brief Job Description

An Electrician does all types of wiring for households, is involved in troubleshooting and repair of electrical faults in existing wiring and other activities such as troubleshooting, replacing, repairing and maintaining common electrical equipments such as ceiling fans, tube light fittings, electric iron, geyser, motors, inverters, stabilizers water pumps etc.

Personal Attributes

The job requires the individual to have good physical strength, strong hands, ability to work for long working hours/nights, good eye visibility and ability to communicate to customer and resolve their problems. The individual should be ethical and well behaved.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- [1. SGJ/N1702: Optimize resource utilization at workplace](#)
- [2. DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)
- [3. PSS/N6001: Preparing for installation of house wiring and repairing of faults](#)
- [4. PSS/N6003: Maintenance and repair of Household electrical gadgets](#)
- [5. PSS/N6002: Installation of Electrical Appliances, Control Circuits & Protection Devices](#)
- [6. PSS/N6005: Develop customer relationship](#)
- [7. PSS/N1331: Apply basic health and safety practices for power related work](#)
- [8. PSS/N1336: Working effectively with others](#)

Qualification Pack (QP) Parameters

Sector	Power
Sub-Sector	Distribution Downstream
Occupation	Supervisory - Distribution
Country	India



Qualification Pack

NSQF Level	3
Credits	13
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7131.1
Minimum Educational Qualification & Experience	8th grade pass plus 2-year NTC plus 1 Year NAC (Electrician) OR 8th grade pass with 1 Year of experience Relevant Experience OR 9th grade pass (And pursuing studies) OR 5th grade pass with 4 Years of experience Relevant Experience
Minimum Level of Education for Training in School	10th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	15 Years
Last Reviewed On	NA
Next Review Date	31/03/2025
NSQC Approval Date	12/01/2023
Version	3.0
Reference code on NQR	2022/POW/PSSC/06924
NQR Version	3.0



Qualification Pack

SGJ/N1702: Optimize resource utilization at workplace

Description

This unit is about adopting sustainable practices and optimizing use of resources, especially material, energy and waste, in day-to-day operations at work

Scope

The scope covers the following :

- Material conservation practices
- Energy/electricity conservation practices
- Effective waste management/recycling practices

Elements and Performance Criteria

Material conservation practices

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

- PC1.** identify ways to optimize usage of material including water in various tasks/activities/processes
- PC2.** check for spills/leakages in various tasks/activities/processes
- PC3.** plug spills/leakages and escalate to appropriate authority if unable to rectify
- PC4.** carry out routine cleaning of tools, machines and equipment

Energy/electricity conservation practices

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

- PC5.** identify ways to optimize usage of electricity/energy in various tasks/activities/processes
- PC6.** check if the equipment/machine is functioning normally before commencing work and rectify wherever required
- PC7.** report malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment
- PC8.** ensure electrical equipment and appliances are properly connected and turned off when not in use

Effective waste management/recycling practices

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

- PC9.** identify recyclable and non-recyclable, and hazardous waste generated
- PC10.** segregate waste into different categories
- PC11.** dispose non-recyclable waste appropriately
- PC12.** deposit recyclable and reusable material at identified location
- PC13.** follow processes specified for disposal of hazardous waste

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:



Qualification Pack

- KU1.** potential hazards, risks and threats based on the nature of work
- KU2.** layout of the workstation and electrical and thermal equipment used
- KU3.** organizations procedures for minimizing waste
- KU4.** efficient and inefficient utilization of material and water
- KU5.** ways of efficiently managing material and water in the process
- KU6.** basics of electricity and prevalent energy efficient devices
- KU7.** ways to recognize common electrical problems
- KU8.** common practices of conserving electricity
- KU9.** usage of different colours of dustbins
- KU10.** categorization of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics
- KU11.** waste management and methods of waste disposal
- KU12.** common sources of pollution and ways to minimize it

Generic Skills (GS)

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

- GS1.** record data on waste disposal at workplace
- GS2.** complete statutory documents relevant to safety and hygiene
- GS3.** read Standard Operating Practices (SOP) documents
- GS4.** communicate with colleagues on the significance of greening of jobs
- GS5.** make timely decisions for efficient utilization of resources
- GS6.** complete tasks efficiently and accurately within stipulated time
- GS7.** work with supervisors/team members to carry out work related tasks
- GS8.** identify cause and effect of greening of jobs



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Material conservation practices</i>	4	8	-	-
PC1. identify ways to optimize usage of material including water in various tasks/activities/processes	1	2	-	-
PC2. check for spills/leakages in various tasks/activities/processes	1	2	-	-
PC3. plug spills/leakages and escalate to appropriate authority if unable to rectify	1	2	-	-
PC4. carry out routine cleaning of tools, machines and equipment	1	2	-	-
<i>Energy/electricity conservation practices</i>	4	8	-	-
PC5. identify ways to optimize usage of electricity/energy in various tasks/activities/processes	1	2	-	-
PC6. check if the equipment/machine is functioning normally before commencing work and rectify wherever required	1	2	-	-
PC7. report malfunctioning (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment	1	2	-	-
PC8. ensure electrical equipment and appliances are properly connected and turned off when not in use	1	2	-	-
<i>Effective waste management/recycling practices</i>	5	10	-	-
PC9. identify recyclable and non-recyclable, and hazardous waste generated	1	2	-	-
PC10. segregate waste into different categories	1	2	-	-
PC11. dispose non-recyclable waste appropriately	1	2	-	-
PC12. deposit recyclable and reusable material at identified location	1	2	-	-
PC13. follow processes specified for disposal of hazardous waste	1	2	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	13	26	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	SGJ/N1702
NOS Name	Optimize resource utilization at workplace
Sector	Green Jobs
Sub-Sector	Other Green Jobs
Occupation	Resource Optimization
NSQF Level	3
Credits	1
Version	1.0
Next Review Date	25/11/2024



Qualification Pack

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

Description

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

Scope

The scope covers the following :

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

Elements and Performance Criteria

Introduction to Employability Skills

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

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

Constitutional values - Citizenship

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

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

Becoming a Professional in the 21st Century

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

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

Basic English Skills

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

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

Communication Skills

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

PC5. follow good manners while communicating with others

PC6. work with others in a team



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Diversity & Inclusion

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

PC7. communicate and behave appropriately with all genders and PwD

PC8. report any issues related to sexual harassment

Financial and Legal Literacy

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

PC9. use various financial products and services safely and securely

PC10. calculate income, expenses, savings etc.

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

Essential Digital Skills

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

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

PC13. use internet and social media platforms securely and safely

Entrepreneurship

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

PC14. identify and assess opportunities for potential business

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

Customer Service

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

PC16. identify different types of customers

PC17. identify customer needs and address them appropriately

PC18. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC19. create a basic biodata

PC20. search for suitable jobs and apply

PC21. identify and register apprenticeship opportunities as per requirement

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

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

KU5. how to use basic spoken English language

KU6. Do and dont of effective communication

KU7. inclusivity and its importance

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

KU9. different types of financial products and services



Qualification Pack

- KU10.** how to compute income and expenses
- KU11.** importance of maintaining safety and security in financial transactions
- KU12.** different legal rights and laws
- KU13.** how to operate digital devices and applications safely and securely
- KU14.** ways to identify business opportunities
- KU15.** types of customers and their needs
- KU16.** how to apply for a job and prepare for an interview
- KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

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

- GS1.** communicate effectively using appropriate language
- GS2.** behave politely and appropriately with all
- GS3.** perform basic calculations
- GS4.** solve problems effectively
- GS5.** be careful and attentive at work
- GS6.** use time effectively
- GS7.** maintain hygiene and sanitisation to avoid infection



Qualification Pack

Assessment Criteria

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



Qualification Pack

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



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	30/04/2028
NSQC Clearance Date	08/05/2025



Qualification Pack

PSS/N6001: Preparing for installation of house wiring and repairing of faults

Description

An Electrician must have good Knowledge of different types of wiring that is being carried out according to the budget of house owner. Skills to utilize the resources-best design, latest technology and longevity of house wiring in best possible way that is also cost effective keeping the protection of wiring, house hold gadgets and property.

Scope

The scope covers the following :

- The job requires the individual to have good physical strength, strong hands, ability to work for long working hours/nights, good eye visibility and ability to communicate to customer and resolve their problems. The individual should be ethical and well behaved.

Elements and Performance Criteria

Develop various types of house wiring planning and drawings/layouts according to specific situation

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

- PC1.** develop circuit and wiring diagram and electrical signages, code specifications to plan wiring layouts, consumption points accurately, as may be required
- PC2.** use various types of tools, their functions and application for carrying out work
- PC3.** understand rating and current carrying capacity of wires, cables, fuse, switches, sockets, mcbs, elcbs and other electrical accessories
- PC4.** lay conduit pipe concealed and open wiring, batten, casing-capping and temporary cleat wiring

Wiring selection , size, ratings of cables, accessories optimization & forecasting

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

- PC5.** implement system in the most economical way
- PC6.** ensure correct requirement of wires, cables, fuse, switches and other electrical accessories for optimal expenditure
- PC7.** ensure wiring and points selected in wiring are according to load growth in future
- PC8.** understand use of under-voltage protective devices, choice of setting of protective devices, labelling of protective devices, switches and terminals
- PC9.** understand insulation resistance of all live conductors to earth, insulation resistance between live conductors
- PC10.** implement methods of protection against electric shock
- PC11.** ensure selection of equipment appropriate to external influences, access to switchgear and equipment, presence of warning signs and danger notices
- PC12.** use updated technology products and take their ageing into consideration

Common electrical faults and repair



Qualification Pack

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

- PC13.** inspect fault locating points e.g. fuse blown, mcb, rcd trip or short circuit location in wiring circuit
- PC14.** ensure open circuit due to overheated switches, socket and wires in control board due to loose contact and overload
- PC15.** check polarity to ensure all switches are connected in phase conductors
- PC16.** check equal distribution of load on three phase wiring in large residential and commercial units
- PC17.** check the color coding, connection and identification of conductors, cables and wires
- PC18.** check routing of cables, proper selection of conductors, wires and connectors and connection of single pole devices

Working safely

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

- PC19.** work safely at all times, complying with health and safety legislation, regulation and other relevant guidelines
- PC20.** adhere to procedures for safety to wear ppes
- PC21.** ensure that all tools & tackles, fittings, accessories etc. are in safe and usable condition
- PC22.** ensure work area is clean and safe from hazards before and after the job is completed

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** job responsibility/ duties and standard operating procedures, if any
- KU2.** escalation matrix and procedures for reporting work and employment related issues
- KU3.** basic elements of electricity, voltage, current, resistance, power, energy, and how electricity flows
- KU4.** basic knowledge of electrical circuits drawings and layouts
- KU5.** wires and cables, their current carrying capacity and their usage
- KU6.** standard procedures followed in house wiring
- KU7.** ratings as per technical terminology of control switches, mcb, elcb, rcd electrical accessories and appliances used in house wiring, their purpose and functioning
- KU8.** how to plan the work correctly using various safety measures. work planning : location, material required and sequence of tasks
- KU9.** all types of conceal, open wiring. size of conduit pipe, batten and casing-capping required for each circuit
- KU10.** depth of groove, channel size, clamping, boxes, hole pass on walls, pre lanter fittings and hooks on ceiling etc. knowledge of inserting steel wire to drag the bunch of wires through conduit pipe
- KU11.** tools and tackles used for house wiring e.g. tools bag containing combination plier, cutter, screw drivers, hammer, chisel, drill machine, wrench set, hacksaw etc. importance of tools and equipment to be kept in a safe and usable condition
- KU12.** specific health and safety precautions which must be taken when carrying out indoor and outdoor wiring, associated hazards, working at heights and ppes must be worn



Qualification Pack

KU13. basics of power regulations and safety requirements as per cea guidelines

Generic Skills (GS)

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

- GS1.** note the information communicated by the customer
- GS2.** route marking on walls
- GS3.** note down observations (if any) related to the operation
- GS4.** read and interpret the process required for different types of drawings i.e. single line diagram, schematic diagram , layout of building/house
- GS5.** read and interpret the flowchart of all parts of house wiring
- GS6.** read and interpret the process required for different types of wiring ensures:a. conduit wiringb. cts clip wiring or batten wiringc. casing and cappingd. cleat wiring
- GS7.** read manuals and documents to understand the product-details & how they can be used
- GS8.** discuss task lists, schedules and activities with the customer/supervisor
- GS9.** effectively communicate with the team members
- GS10.** attentively listen and comprehend the information given by the customer/supervisor/contractor
- GS11.** communicate clearly with the customer on the issues faced during query/fault
- GS12.** follow customer/contractor rule-based decision making process
- GS13.** take decision with systematic course of actions and/or response
- GS14.** planning and organization of tasks to meet deadlines
- GS15.** build customer relationships and use customer centric approach
- GS16.** seek and comprehend operation related inputs for clarification
- GS17.** find ways of modifying difficult operating stages to make them operation friendly
- GS18.** plan layout of wiring to achieve the shortest and most reliable path
- GS19.** work systematically and logically to resolve the issues and identify causation and anticipate unexpected results
- GS20.** critically evaluate operation parameters in relation to product features intended
- GS21.** develop holistic and comprehensive profile of products based on segregated discrete process stages of blank forming processes



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Develop various types of house wiring planning and drawings/layouts according to specific situation</i>	9	9	-	-
PC1. develop circuit and wiring diagram and electrical signages, code specifications to plan wiring layouts, consumption points accurately, as may be required	2	1	-	-
PC2. use various types of tools, their functions and application for carrying out work	4	2	-	-
PC3. understand rating and current carrying capacity of wires, cables, fuse, switches, sockets, mcbs, elcbs and other electrical accessories	2	3	-	-
PC4. lay conduit pipe concealed and open wiring, batten,casing-capping and temporary cleat wiring	1	3	-	-
<i>Wiring selection , size, ratings of cables, accessories optimization & forecasting</i>	11	29	-	-
PC5. implement system in the most economical way	2	3	-	-
PC6. ensure correct requirement of wires, cables, fuse, switches and other electrical accessories for optimal expenditure	3	3	-	-
PC7. ensure wiring and points selected in wiring are according to load growth in future	2	3	-	-
PC8. understand use of under-voltage protective devices, choice of setting of protective devices, labelling of protective devices, switches and terminals	-	6	-	-
PC9. understand insulation resistance of all live conductors to earth, insulation resistance between live conductors	1	3	-	-
PC10. implement methods of protection against electric shock	-	5	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. ensure selection of equipment appropriate to external influences, access to switchgear and equipment, presence of warning signs and danger notices	2	3	-	-
PC12. use updated technology products and take their ageing into consideration	1	3	-	-
<i>Common electrical faults and repair</i>	8	18	-	-
PC13. inspect fault locating points e.g. fuse blown, mcb, rcd trip or short circuit location in wiring circuit	1	3	-	-
PC14. ensure open circuit due to overheated switches, socket and wires in control board due to loose contact and overload	1	3	-	-
PC15. check polarity to ensure all switches are connected in phase conductors	-	5	-	-
PC16. check equal distribution of load on three phase wiring in large residential and commercial units	2	3	-	-
PC17. check the color coding, connection and identification of conductors, cables and wires	3	2	-	-
PC18. check routing of cables, proper selection of conductors, wires and connectors and connection of single pole devices	1	2	-	-
<i>Working safely</i>	2	14	-	-
PC19. work safely at all times, complying with health and safety legislation, regulation and other relevant guidelines	-	3	-	-
PC20. adhere to procedures for safety to wear ppe	1	4	-	-
PC21. ensure that all tools & tackles, fittings, accessories etc. are in safe and usable condition	-	4	-	-
PC22. ensure work area is clean and safe from hazards before and after the job is completed	1	3	-	-
NOS Total	30	70	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	PSS/N6001
NOS Name	Preparing for installation of house wiring and repairing of faults
Sector	Power
Sub-Sector	Distribution Downstream
Occupation	Household Wiring & Maintenance
NSQF Level	3
Credits	2
Version	2.0
Last Reviewed Date	NA
Next Review Date	31/03/2025
NSQF Clearance Date	12/01/2023



Qualification Pack

PSS/N6003: Maintenance and repair of Household electrical gadgets

Description

Ensures proper maintenance for the systems healthy, long and safe life.

Scope

The scope covers the following :

- This unit/task covers the following:
 1. Inspection & Testing
 2. Types of single and three phase motors
 3. Types of heating element, thermal relays and insulation
 4. Repair and maintenance of household electrical appliances
 5. Repair and maintenance of roof top solar panel

Elements and Performance Criteria

Inspection & Testing

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

- PC1.** read and interpret drawings, circuit diagrams and electrical code specifications of the electrical equipment, gadgets
- PC2.** read, interpret and understand the capacity in kw, load in amperes and power consumption in kwh for each appliance
- PC3.** check connection of equipment, checking for status of tripping device
- PC4.** ensure presence of appropriate devices for isolating and switching

Types of Single phase motors

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

- PC5.** understand operating principle of single phase motor, use of condenser
- PC6.** understand how rotating field is developed in single phase and three phase motor
- PC7.** understand the significance of number of poles significance in motor winding for rpm, speed and direction change
- PC8.** measure insulation resistance of motor winding with live conductors to earth and insulation resistance between live conductors
- PC9.** understand various parts of motors, pumps and their function like ball bearings, cooling fans, fins and bushes
- PC10.** understand various types of winding wires, their gauge and insulating materials for motor winding

Types of heating element, thermal relays and insulation

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

- PC11.** understand materials used to make various types of heating elements like nicrome, kanthal, eureka etc., various shape, size and capacity of heating elements according to applications and usages



Qualification Pack

PC12. understand types of thermal insulations used in electrical gadgets like mica, asbestos, ceramics, glass wool etc.

PC13. understand timers (motorized, mechanical), thermal relays, bimetallic strips

Repair and maintenance of small electrical appliances.

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

PC14. ensure preventive maintenance, regular cleaning, oiling, greasing of house hold gadgets like fans, desert cooler, water pump motors etc.

PC15. replace damaged switches, MCB, fan- capacitor, regulator, lighting points i.e. holder, choke, starters, water coolers and their pump & motor

PC16. ensure regular maintenance of electrical equipments like- iron, toaster, induction-plate & cooker

PC17. ensure regular maintenance of doorbells, fl tube starters & chokes

PC18. preventative maintenance of batteries

PC19. solder winding wires, cables and their joints in electrical gadgets

Repair and maintenance of roof top solar System

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

PC20. verify system grounding and measure insulation resistance

PC21. clean solar panels for removal of dust, bird droppings, pollen, leaves, branches etc. as per maintenance schedule

PC22. ensure all electrical connections as per specification, measure and record dc voltages and currents and identify the faults in the system

PC23. check for working condition of fuses, circuit breakers and all cables for loose connections

PC24. take adequate precautionary measures while handling electrical system adhering to relevant health and safety standards

PC25. understand that if reason of error is not clear, do not try to fix anything and call OEM repair and maintenance team

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. job responsibilities/duties and standard operating procedures

KU2. escalation matrix and procedures for reporting work and employment related issues

KU3. basic electricity voltage, current, resistance, power, series and parallel circuits

KU4. products, their ratings as per name plate signs and technical terminology

KU5. types of heating elements used in domestic appliances, strips, round and flat conductors (nicrome, kental, eureka) open, in tube, engulfed with thermal insulations like mica, asbestos, ceramics etc.

KU6. single phase motor, their operating principle, armature and rotor design, significance of number of poles in motor winding, connection of starting and running windings, rpm calculation, cooling system

KU7. gun metal bushing, ball bearing size and where to apply machine oil, grease at rotating parts of domestic appliances



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- KU8.** how to operate measuring instruments proficiently i.e. ohm meter, ammeter, voltmeter, clamp on meter, multi meter
- KU9.** functioning and use of house hold gadgets, their tripping circuits, thermal bimetalic relays, timers (mechanical, motorized and thermal). their current carrying capacity, size of leads, size of conductor
- KU10.** inverter, their circuit connections, how power backup develop in case of supply failure, trickle charging, checking of battery status and their schedule checkups
- KU11.** specific health and safety precautions which must be taken when carrying out repair and maintenance, associated hazards, working at heights and ppes must be worn
- KU12.** service warranty of electrical gadgets, opening of companys seal and authorization

Generic Skills (GS)

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

- GS1.** note the information communicated by the customer
- GS2.** note down observations (if any) related to the operation/maintenance
- GS3.** read and interpret the process required for different types of manuals for maintenance
- GS4.** read and interpret the flowchart of all parts of an assembly
- GS5.** read manuals and documents to understand the product-details & how they can be used
- GS6.** discuss task lists, schedules and activities with the customer/supervisor
- GS7.** effectively communicate with the team members
- GS8.** attentively listen and comprehend the information given by the customer/supervisor/contractor
- GS9.** communicate clearly with the customer on the issues faced during query/fault
- GS10.** follow customer/contractor rule-based decision making process
- GS11.** take decision with systematic course of actions and/or response
- GS12.** planning and organization of tasks to meet deadlines
- GS13.** build customer relationships and use customer centric approach
- GS14.** seek and comprehend operation related inputs for clarification
- GS15.** find ways of modifying difficult operating stages to make it operation friendly
- GS16.** works systematically and logically to resolve the issues and identify causation and anticipate unexpected results
- GS17.** quick approach and solution towards faults repairing
- GS18.** critically evaluate operation parameters in relation to product features intended
- GS19.** develop holistic and comprehensive profile of products based on segregated discrete process stages of blank forming processes



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Inspection & Testing</i>	10	8	-	-
PC1. read and interpret drawings, circuit diagrams and electrical code specifications of the electrical equipment, gadgets	3	4	-	-
PC2. read, interpret and understand the capacity in kw, load in amperes and power consumption in kwh for each appliance	3	1	-	-
PC3. check connection of equipment, checking for status of tripping device	2	2	-	-
PC4. ensure presence of appropriate devices for isolating and switching	2	1	-	-
<i>Types of Single phase motors</i>	13	5	-	-
PC5. understand operating principle of single phase motor, use of condenser	4	1	-	-
PC6. understand how rotating field is developed in single phase and three phase motor	2	-	-	-
PC7. understand the significance of number of poles significance in motor winding for rpm, speed and direction change	2	1	-	-
PC8. measure insulation resistance of motor winding with live conductors to earth and insulation resistance between live conductors	1	2	-	-
PC9. understand various parts of motors, pumps and their function like ball bearings, cooling fans, fins and bushes	2	1	-	-
PC10. understand various types of winding wires, their gauge and insulating materials for motor winding	2	-	-	-
<i>Types of heating element, thermal relays and insulation</i>	2	11	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. understand materials used to make various types of heating elements like nicrome, kanthal, eureka etc., various shape, size and capacity of heating elements according to applications and usages	-	4	-	-
PC12. understand types of thermal insulations used in electrical gadgets like mica, asbestos, ceramics, glass wool etc.	-	4	-	-
PC13. understand timers (motorized, mechanical), thermal relays, bimetallic strips	2	3	-	-
<i>Repair and maintenance of small electrical appliances.</i>	9	27	-	-
PC14. ensure preventive maintenance, regular cleaning, oiling, greasing of house hold gadgets like fans, desert cooler, water pump motors etc.	-	4	-	-
PC15. replace damaged switches, MCB, fan-capacitor, regulator, lighting points i.e. holder, choke, starters, water coolers and their pump & motor	2	4	-	-
PC16. ensure regular maintenance of electrical equipments like- iron, toaster, induction-plate & cooker	2	6	-	-
PC17. ensure regular maintenance of doorbells, fl tube starters & chokes	2	6	-	-
PC18. preventative maintenance of batteries	2	3	-	-
PC19. solder winding wires, cables and their joints in electrical gadgets	1	4	-	-
<i>Repair and maintenance of roof top solar System</i>	4	11	-	-
PC20. verify system grounding and measure insulation resistance	-	2	-	-
PC21. clean solar panels for removal of dust, bird droppings, pollen, leaves, branches etc. as per maintenance schedule	-	2	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC22. ensure all electrical connections as per specification, measure and record dc voltages and currents and identify the faults in the system	1	1	-	-
PC23. check for working condition of fuses, circuit breakers and all cables for loose connections	1	1	-	-
PC24. take adequate precautionary measures while handling electrical system adhering to relevant health and safety standards	-	2	-	-
PC25. understand that if reason of error is not clear, do not try to fix anything and call OEM repair and maintenance team	2	3	-	-
NOS Total	38	62	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	PSS/N6003
NOS Name	Maintenance and repair of Household electrical gadgets
Sector	Power
Sub-Sector	Distribution Downstream
Occupation	Household Wiring & Maintenance
NSQF Level	3
Credits	2.5
Version	2.0
Last Reviewed Date	NA
Next Review Date	31/03/2025
NSQC Clearance Date	12/01/2023



Qualification Pack

PSS/N6002: Installation of Electrical Appliances, Control Circuits & Protection Devices

Description

The job holder ensures proper connection of mains, distribution board, junction box, switches, lamp holders, fittings, plugs, sockets and protective devices like fuses, MCB, ELCB, RCD etc. and earthing in the best possible manner in domestic houses

Scope

The scope covers the following :

- This unit/task covers the following:
 1. Ensure of mains, distribution board and protection devices
 2. Ensure of new power points, extension boards
 3. Ensure of protective devices
 4. Types of earthing, procedure to lay and its connection in house wiring. Ensure of electrical appliances
 5. Types and use of test instruments in house wiring

Elements and Performance Criteria

Ensure connection of mains, distribution board and protection devices

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

- PC1.** understand standard location of main board ensure for utility service line connection
- PC2.** understand layout of main switch, circuit breakers require at main board
- PC3.** ensure of controlling and protection devices for different circuits being used for lighting and power loads at each floor or portion

Ensure of new power points, extension boards.

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

- PC4.** check types of conduit, batten, underground and open wiring
- PC5.** locate and mark the position of conduit pipe ensures, connections into the structures with proper equipments like measuring tape, hammer, saw, drill machines etc.
- PC6.** cut openings in structures to accommodate conduit pipes or pipe fittings, using hand or power tools
- PC7.** read plan ensure around obstructions like electrical wiring, gas fittings etc.
- PC8.** laying of conduit pipe with clamps
- PC9.** install brackets and hangers to support electrical equipment
- PC10.** install, replace and repair lighting fixtures and electrical control and distribution equipment, such as switches, relays and circuit breaker panels
- PC11.** lay & pull wire through conduits and through holes in walls and floors
- PC12.** join and connect wire to fixtures and components to form circuits



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PC13. prepare extended line for additional points with bearing capacity of existing system or augment/replacement of existing lines to with hold the additional load

Ensure of protective devices

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

- PC14.** install the protective device i.e. fuse, mcb, rccb, mccbs ratings as per the load
- PC15.** ensure proper working and functioning of all protective devices that are necessary to save lives of human, livestock, animals
- PC16.** ensure fuse, switch or circuit breaker should not be placed in an earthed neutral conductor and are wired only in the phase conductor only
- PC17.** ensure all the connections are made properly, tightened and color coding
- PC18.** ensure that the correct type, size and current-carrying capacity of cables is chosen to bear the load
- PC19.** ensure that the all accessible points which may be switched on/off must be easily approached by the users

Types of earthing, procedure to lay and its connection in house wiring.Ensure of electrical appliances

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

- PC20.** understand types of earthing plate and pipe earthing layout location
- PC21.** understand importance of earth connection with household gadgets and equipment
- PC22.** understand procedure of earth connection with appliance, sockets main board and distribution board
- PC23.** use of devices available in market such as trimmers, impulse relay, programmable switch, twilight switch, movement detector
- PC24.** ensure of assembling of various type, design and capacity fans, tube lights, led lights, bulbs, lamps, doorbells, switches, geysers, inverters, exhaust fan, safety alarms, decorative lights and chandliers
- PC25.** ensure of various size and capacity water pump motors according to the load with their control circuit of water level in tank

Types and use of test instruments in house wiring

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

- PC26.** make connections and operate instruments to check the healthiness of house wiring in terms of leakage insulation resistance
- PC27.** operate instruments to check the continuity, open circuit, short circuit and load flow
- PC28.** operate instruments to check the earth resistance

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** job responsibilities/duties and standard operating procedures
- KU2.** escalation matrix and procedures for reporting work and employee related issues
- KU3.** electricity, power, energy mains and distribution circuits
- KU4.** product, their ratings, current carrying capacity, color coding, loading capacity and their connection in case of extension/augmentation in existing system
- KU5.** standard procedure to lay pipe and plate earthing



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- KU6.** laying of earth wire conductor in wiring and their connections
- KU7.** laying staircase, corridor, electric alarm, inverter and other related circuits using push button, two way, door and limit switches
- KU8.** laying communication cables like network, tv, radio, telephone with their accessories fittings and ensure quality of connections
- KU9.** power equipment tools and ability to operate proficiently
- KU10.** test instruments like test lamp, multimeter, neon tester, clamp on meter, insulation and earth megger and ensure safe usage
- KU11.** tools and tackles used for house wiring. importance of tools and equipment to be kept in a safe and usable condition
- KU12.** specific health and safety precautions which must be taken when carrying out indoor and outdoor wiring, associated hazards, working at height and ppe must be worn

Generic Skills (GS)

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

- GS1.** note the information communicated by the customer & note down observations (if any) related to the operation
- GS2.** read and interpret the process required for different types of wiring installation
- GS3.** read and interpret the flowchart of all parts of an assembly
- GS4.** read manuals and documents to understand the product-details & how they can be used
- GS5.** discuss task lists, schedules and activities with the customer/supervisor
- GS6.** effectively communicate with the team members
- GS7.** attentively listen and comprehend the information given by the customer/supervisor/contractor
- GS8.** communicate clearly with the customer on the issues faced during query/fault
- GS9.** follow customer/contractor rule-based decision making process
- GS10.** take decision with systematic course of actions and/or response
- GS11.** planning and organization of tasks to meet deadlines
- GS12.** build customer relationships and use customer centric approach
- GS13.** seek and comprehend operation related inputs for clarification
- GS14.** find ways of modifying difficult operating stages to make it operation friendly
- GS15.** plan layout of wiring, to become shortest and reliable path
- GS16.** work systematically and logically to resolve the issues and identify causation and anticipate unexpected results
- GS17.** critically evaluate operation parameters in relation to product features intended
- GS18.** develop holistic and comprehensive profile of products based on segregated discrete process stages of blank forming processes



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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure connection of mains, distribution board and protection devices</i>	7	8	-	-
PC1. understand standard location of main board ensure for utilities service line connection	3	3	-	-
PC2. understand layout of main switch, circuit breakers require at main board	2	3	-	-
PC3. ensure of controlling and protection devices for different circuits being used for lighting and power loads at each floor or portion	2	2	-	-
<i>Ensure of new power points, extension boards.</i>	10	29	-	-
PC4. check types of conduit, batten, underground and open wiring	1	3	-	-
PC5. locate and mark the position of conduit pipe ensures, connections into the structures with proper equipments like measuring tape, hammer, saw, drill machines etc.	1	3	-	-
PC6. cut openings in structures to accommodate conduit pipes or pipe fittings, using hand or power tools	-	4	-	-
PC7. read plan ensure around obstructions like electrical wiring, gas fittings etc.	2	2	-	-
PC8. laying of conduit pipe with clamps	-	1	-	-
PC9. install brackets and hangers to support electrical equipment	-	1	-	-
PC10. install, replace and repair lighting fixtures and electrical control and distribution equipment, such as switches, relays and circuit breaker panels	2	4	-	-
PC11. lay & pull wire through conduits and through holes in walls and floors	-	4	-	-
PC12. join and connect wire to fixtures and components to form circuits	2	4	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. prepare extended line for additional points with bearing capacity of existing system or augment/replacement of existing lines to with hold the additional load	2	3	-	-
<i>Ensure of protective devices</i>	7	15	-	-
PC14. install the protective device i.e. fuse, mcb, rccb, mccbs ratings as per the load	2	4	-	-
PC15. ensure proper working and functioning of all protective devices that are necessary to save lives of human, livestock, animals	1	2	-	-
PC16. ensure fuse, switch or circuit breaker should not be placed in an earthed neutral conductor and are wired only in the phase conductor only	-	3	-	-
PC17. ensure all the connections are made properly, tightened and color coding	1	3	-	-
PC18. ensure that the correct type, size and current-carrying capacity of cables is chosen to bear the load	1	2	-	-
PC19. ensure that the all accessible points which may be switched on/off must be easily approached by the users	2	1	-	-
<i>Types of earthing, procedure to lay and its connection in house wiring.Ensure of electrical appliances</i>	7	11	-	-
PC20. understand types of earthing plate and pipe earthing layout location	2	2	-	-
PC21. understand importance of earth connection with household gadgets and equipment	2	1	-	-
PC22. understand procedure of earth connection with appliance, sockets main board and distribution board	1	2	-	-
PC23. use of devices available in market such as trimmers, impulse relay, programmable switch, twilight switch, movement detector	-	2	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC24. ensure of assembling of various type, design and capacity fans, tube lights, led lights, bulbs, lamps, doorbells, switches, geysers, inverters, exhaust fan, safety alarms, decorative lights and chandliers	1	2	-	-
PC25. ensure of various size and capacity water pump motors according to the load with their control circuit of water level in tank	1	2	-	-
<i>Types and use of test instruments in house wiring</i>	-	6	-	-
PC26. make connections and operate instruments to check the healthiness of house wiring in terms of leakage insulation resistance	-	2	-	-
PC27. operate instruments to check the continuity, open circuit, short circuit and load flow	-	2	-	-
PC28. operate instruments to check the earth resistance	-	2	-	-
NOS Total	31	69	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	PSS/N6002
NOS Name	Installation of Electrical Appliances, Control Circuits & Protection Devices
Sector	Power
Sub-Sector	Distribution Downstream
Occupation	Household Wiring & Maintenance
NSQF Level	3
Credits	3.0
Version	2.0
Last Reviewed Date	NA
Next Review Date	31/03/2025
NSQC Clearance Date	12/01/2023



Qualification Pack

PSS/N6005: Develop customer relationship

Description

Make a bond with customer through effective communication and exchange information. Providing all updates to customers regarding the new services, policies, initiatives of the DISCOM/Utility.

Scope

The scope covers the following :

- This NOS covers the following:
 1. Establish rapport with customer
 2. Gather information to assess Consumer's needs and seek his/her consent to your proposal
 3. Explain new services, options and rates to customers.
 4. Respond to customer's comments and questions
 5. Resolve consumer's problems to his/her full satisfaction

Elements and Performance Criteria

Establish rapport with customer

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

- PC1.** ensure effective verbal communications are polite, clear and completed in a timely manner
- PC2.** ensure promote greeting or acknowledgement and offer of assistance are provided to customer
- PC3.** ensure consumer is asked if there is anything else they can be helped with
- PC4.** ensure tone of voice and place are monitored to ensure that trust is built

Gather information to assess Consumers needs and seek his/her consent to your proposal

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

- PC5.** ensure effective and efficient line of questioning is used
- PC6.** ensure consumer needs are correctly identified in a timely manner
- PC7.** ensure techniques used are personalized to meet the needs of customers with different cultural backgrounds and demographics, including age and disability status
- PC8.** submit a crisp proposal answering needs of the consumer with financial estimate component, explain full details and seek his/her consent to begin the job

Explain new products, options to customers

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

- PC9.** understand new initiative taken up by company in reference to energy conservation products by providing led lamps, 5 star rating electric gadgets
- PC10.** ensure power generation equipment like genset, solar panels etc. and other non conventional energy source

Respond to Consumers comments and questions

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



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- PC11.** ensure appropriate explanation/ solution/ option are determined for the consumers situation
- PC12.** ensure customer communications are paraphrased to confirm understanding
- PC13.** ensure consumer needs are recognized and acknowledged
- PC14.** ensure issues are escalated or advice is solicited from appropriate departmental staff when necessary to meet consumer needs

Resolve consumers problems to his/her full satisfaction

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

- PC15.** show patience : if you deal with consumer on a daily basis, be sure to stay patient when you meet them and they are stumped and frustrated
- PC16.** show attentiveness : the ability to really listen to consumer is so crucial for providing great service for a number of reasons
- PC17.** show clear communication skills : when it comes to important points that you need to relay clearly to consumers, keep it simple and leave nothing to doubt
- PC18.** show time management skills : dont waste time trying to go above and beyond for a consumer in an service area where you will just end of wasting both of your time
- PC19.** show ability to read consumer : look and listen for subtle clues about their current mood, patience level, personality etc. and youll go for in keeping your coustomer interaction positive
- PC20.** maintain a calming presence
- PC21.** show ability to use positive language
- PC22.** show closing ability : being able to close with a consumer means being able to end the service with confirmed satisfaction (or as close to it as you can achieve) and with the consumer feeling that everything has been worked on

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** job responsibilities/duties and standard operating procedures, if any
- KU2.** processes like key contact points/customer service details for query resolution related to electrical product or wiring
- KU3.** escalation matrix and procedures for reporting employment related issues
- KU4.** power outage
- KU5.** basic electricity voltage, current, resistance, power, series and parallel circuits
- KU6.** products, their ratings as per name plate signs and technical terminology
- KU7.** types of product available with different companies

Generic Skills (GS)

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

- GS1.** note the query, issues, specifications and fault observation if required
- GS2.** note down observations (if any) communicated by consumer and related electricity rules
- GS3.** ie act and operation



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- GS4.** read and interpret the handling process required for various types of consumer complaints
- GS5.** read and interpret the process required for all consumer related issues
- GS6.** read oem specification on products
- GS7.** discuss task lists, schedules and activities with team member, if any
- GS8.** effectively communicate with the team members
- GS9.** attentively listen and comprehend the information given by the customer
- GS10.** communicate clearly with the customer on the issues faced during query/fault
- GS11.** apply logical decision making process
- GS12.** take decision with systematic course of actions and/or response
- GS13.** planning and organization of tasks to meet deadlines
- GS14.** build consumer relationships and use consumer centric approach
- GS15.** seek and comprehend operation related inputs for clarification
- GS16.** find ways of modifying difficult operating stages to make it operation friendly
- GS17.** apply domain information to set and define operation parameters that ensures economy and quality to supply



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Establish rapport with customer</i>	4	16	-	-
PC1. ensure effective verbal communications are polite, clear and completed in a timely manner	2	4	-	-
PC2. ensure promote greeting or acknowledgement and offer of assistance are provided to customer	-	4	-	-
PC3. ensure consumer is asked if there is anything else they can be helped with	-	4	-	-
PC4. ensure tone of voice and place are monitored to ensure that trust is built	2	4	-	-
<i>Gather information to assess Consumers needs and seek his/her consent to your proposal</i>	8	9	-	-
PC5. ensure effective and efficient line of questioning is used	4	2	-	-
PC6. ensure consumer needs are correctly identified in a timely manner	2	2	-	-
PC7. ensure techniques used are personalized to meet the needs of customers with different cultural backgrounds and demographics, including age and disability status	2	2	-	-
PC8. submit a crisp proposal answering needs of the consumer with financial estimate component, explain full details and seek his/her consent to begin the job	-	3	-	-
<i>Explain new products, options to customers</i>	1	7	-	-
PC9. understand new initiative taken up by company in reference to energy conservation products by providing led lamps, 5 star rating electric gadgets	1	3	-	-
PC10. ensure power generation equipment like genset, solar panels etc. and other non conventional energy source	-	4	-	-
<i>Respond to Consumers comments and questions</i>	5	11	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. ensure appropriate explanation/ solution/ option are determined for the consumers situation	-	4	-	-
PC12. ensure customer communications are paraphrased to confirm understanding	3	2	-	-
PC13. ensure consumer needs are recognized and acknowledged	-	4	-	-
PC14. ensure issues are escalated or advice is solicited from appropriate departmental staff when necessary to meet consumer needs	2	1	-	-
<i>Resolve consumers problems to his/her full satisfaction</i>	12	27	-	-
PC15. show patience : if you deal with consumer on a daily basis, be sure to stay patient when you meet them and they are stumped and frustrated	1	4	-	-
PC16. show attentiveness : the ability to really listen to consumer is so crucial for providing great service for a number of reasons	2	3	-	-
PC17. show clear communication skills : when it comes to important points that you need to relay clearly to consumers, keep it simple and leave nothing to doubt	2	3	-	-
PC18. show time management skills : dont waste time trying to go above and beyond for a consumer in an service area where you will just end of wasting both of your time	2	3	-	-
PC19. show ability to read consumer : look and listen for subtle clues about their current mood, patience level, personality etc. and youll go for in keeping your customer interaction positive	2	3	-	-
PC20. maintain a calming presence	2	3	-	-
PC21. show ability to use positive language	-	4	-	-
PC22. show closing ability : being able to close with a consumer means being able to end the service with confirmed satisfaction (or as close to it as you can achieve) and with the consumer feeling that everything has been worked on	1	4	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	30	70	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	PSS/N6005
NOS Name	Develop customer relationship
Sector	Power
Sub-Sector	Distribution Downstream
Occupation	Household Wiring & Maintenance
NSQF Level	3
Credits	1.0
Version	2.0
Last Reviewed Date	NA
Next Review Date	31/03/2025
NSQC Clearance Date	12/01/2023



Qualification Pack

PSS/N1331: Apply basic health and safety practices for power related work

Description

This unit covers health, safety and security for power related work. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment in a power plant, power station/substation or on the field while working on power equipment. It covers responsibilities towards self, others, organizational assets and the environment.

Scope

The scope covers the following :

- Follow workplace health and safety practices
- Follow fire safety practices
- Follow emergencies, rescue and first-aid procedures

Elements and Performance Criteria

Follow workplace health and safety practices

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

- PC1.** use protective clothing/equipment for specific tasks and work conditions (Protective clothing: leather or asbestos gloves, flame proof aprons, flame proof overalls buttoned to neck, cuff less (without folds) trousers, reinforced footwear, helmets/hard hats, cap and shoulder covers, ear defenders/plugs, safety boots, knee pads, particle masks, glasses/goggles/visors) (Equipment: hand and face shields, machine guards, residual current devices, shields, dust sheets, respirator)
- PC2.** identify job-site hazards and possible causes of risks/accident at the workplace (Hazards: electrical hazards, sharp edged and heavy tools, heated metals, oxyfuel and gas cylinders, welding radiation, hazardous surfaces, hazardous substances, physical hazards. Possible causes of risk and accident: physical actions, not following instructions, inattention, sickness and incapacity, health, not taking safety precautions)
- PC3.** use standard safe working practices when working at heights, confined areas, trenches and with electrical equipment
- PC4.** follow warning signs and symbols while working with electrical systems (Warning signs: Danger plate, high voltage area, out of service, etc.)
- PC5.** ensure positive isolation of electrical equipment and system as per the given standards
- PC6.** identify any abnormalities in electrical equipment or system viz temperature, pressure, flow of current etc.
- PC7.** use various methods of accident prevention in the work environment (Methods of accident prevention: use of equipment and working practices, safety notices, advice, instruction from colleagues and supervisors)
- PC8.** use proper scaffolds, elevated platforms and ladders for working at height
- PC9.** inspect various tools and plants (T & P) routinely for any signs of oil, water leakages
- PC10.** store flammable materials and machine lubricating oil safely and correctly



Qualification Pack

- PC11.** check that the emission and pollution control devices are working properly in line with environmental policy standards
- PC12.** inform the relevant authorities about any abnormal situation/behavior of any equipment/system without delay

Follow fire safety practices

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

- PC13.** use various appropriate fire extinguishers for different types of fires correctly (Types of fires: Class A, B, C, D and E)
- PC14.** use appropriate rescue techniques during fire hazard
- PC15.** use good housekeeping practices at all times to avoid accidental fire

Follow emergencies, rescue and first-aid procedures

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

- PC16.** administer appropriate first aid to the victims for the relevant injuries (Injuries: Bleeding, burns, choking, electric shock, poisoning etc.)
- PC17.** act promptly and appropriately to an accident situation and administer basic first aid including CPR to the victims of cardiac arrest due to electric shock or medical emergency in real
- PC18.** write an incident report and send the same to the authorized person

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** names (and job titles if applicable) and location of all documents along with the people responsible for health and safety in a workplace
- KU2.** possible causes of risk and accident: physical actions, not following instructions, inattention, sickness and incapacity (such as drunkenness), health hazards (such as untreated injuries and contagious illness), not taking safety precautions
- KU3.** safe working practices when working with tools, machines
- KU4.** positive isolation of electrical equipment and system
- KU5.** use of emission and pollution control devices and measures taken to control pollution
- KU6.** preventative and remedial actions to be taken in the case of exposure to toxic materials solvents, flux, lead etc.
- KU7.** precautionary measures taken to prevent fire accident
- KU8.** various causes of fire (Causes of fires: heating of metal, spontaneous ignition, sparking, electrical heating, loose fires (smoking, welding, etc.), chemical fires, etc.)
- KU9.** different materials (sand, water, foam, CO₂, dry powder) used in fire extinguisher and proper method of using it to extinguish fire
- KU10.** various types of safety signs with their names
- KU11.** basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries basic techniques of bandaging
- KU12.** artificial respiration and the CPR Process



Qualification Pack

Generic Skills (GS)

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

- GS1.** read & write an accident/ incident report in local language and/or English
- GS2.** read and comprehend basic content to read labels, charts, signages, manuals etc.
- GS3.** question co-workers appropriately and give clear instruction to them and sub ordinates in order to clarify instructions
- GS4.** remain congenial while discussing and debating issues with co-workers
- GS5.** observe appropriate protocols for communication based on situation, hierarchy, organizational culture and practice
- GS6.** plan and organize work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity
- GS7.** build customer relationships and use customer centric approach
- GS8.** seek assistance from other sources to resolve problem and report problems that cannot be resolved to the appropriate authority



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Follow workplace health and safety practices</i>	25	36	-	-
PC1. use protective clothing/equipment for specific tasks and work conditions (Protective clothing: leather or asbestos gloves, flame proof aprons, flame proof overalls buttoned to neck, cuff less (without folds) trousers, reinforced footwear, helmets/hard hats, cap and shoulder covers, ear defenders/plugs, safety boots, knee pads, particle masks, glasses/goggles/visors) (Equipment: hand and face shields, machine guards, residual current devices, shields, dust sheets, respirator)	3	5	-	-
PC2. identify job-site hazards and possible causes of risks/accident at the workplace (Hazards: electrical hazards, sharp edged and heavy tools, heated metals, oxyfuel and gas cylinders, welding radiation, hazardous surfaces, hazardous substances, physical hazards. Possible causes of risk and accident: physical actions, not following instructions, inattention, sickness and incapacity, health, not taking safety precautions)	3	2	-	-
PC3. use standard safe working practices when working at heights, confined areas, trenches and with electrical equipment	3	5	-	-
PC4. follow warning signs and symbols while working with electrical systems (Warning signs: Danger plate, high voltage area, out of service, etc.)	2	2	-	-
PC5. ensure positive isolation of electrical equipment and system as per the given standards	2	4	-	-
PC6. identify any abnormalities in electrical equipment or system viz temperature, pressure, flow of current etc.	2	4	-	-
PC7. use various methods of accident prevention in the work environment (Methods of accident prevention: use of equipment and working practices, safety notices, advice, instruction from colleagues and supervisors)	2	-	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC8. use proper scaffolds, elevated platforms and ladders for working at height	2	3	-	-
PC9. inspect various tools and plants (T & P) routinely for any signs of oil, water leakages	2	3	-	-
PC10. store flammable materials and machine lubricating oil safely and correctly	2	2	-	-
PC11. check that the emission and pollution control devices are working properly in line with environmental policy standards	1	3	-	-
PC12. inform the relevant authorities about any abnormal situation/behavior of any equipment/system without delay	1	3	-	-
<i>Follow fire safety practices</i>	6	12	-	-
PC13. use various appropriate fire extinguishers for different types of fires correctly (Types of fires: Class A, B, C, D and E)	3	5	-	-
PC14. use appropriate rescue techniques during fire hazard	2	5	-	-
PC15. use good housekeeping practices at all times to avoid accidental fire	1	2	-	-
<i>Follow emergencies, rescue and first-aid procedures</i>	8	13	-	-
PC16. administer appropriate first aid to the victims for the relevant injuries (Injuries: Bleeding, burns, choking, electric shock, poisoning etc.)	3	6	-	-
PC17. act promptly and appropriately to an accident situation and administer basic first aid including CPR to the victims of cardiac arrest due to electric shock or medical emergency in real	2	5	-	-
PC18. write an incident report and send the same to the authorized person	3	2	-	-
NOS Total	39	61	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	PSS/N1331
NOS Name	Apply basic health and safety practices for power related work
Sector	Power
Sub-Sector	Generic
Occupation	Generic
NSQF Level	2
Credits	1.5
Version	2.0
Next Review Date	31/08/2026



Qualification Pack

PSS/N1336: Working effectively with others

Description

This unit covers basic practices that improve effectiveness of working with others in an organizational set-up

Scope

The scope covers the following :

- Work effectively with others
- Respect diversity

Elements and Performance Criteria

Work effectively with others

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

- PC1.** accept information and instructions from the supervisor and fellow workers and seek clarification when required
- PC2.** pass the information to the persons to all those concerns within agreed timeframe in a manner they can understand and confirm its receipt
- PC3.** help & assist fellow workers in performing their tasks in a positive manner so as to maximize efficiency
- PC4.** use appropriate tone, pitch and language while communicating to convey politeness, assertiveness, care and professionalism
- PC5.** listen attentively and respond appropriately while interacting with others at work
- PC6.** act responsibly and demonstrate disciplined behaviour at the workplace (Disciplined behaviour: Punctuality, completing tasks within agreed timescales, ensuring quality standards, not gossiping and wasting time, honesty, etc.)
- PC7.** escalate grievances and problems to the appropriate authority as per the organizational procedure to resolve them and avoid conflict

Respect diversity

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

- PC8.** respect gender diversity in the workplace
- PC9.** use respectful verbal, non-verbal and written communication that is gender, disability and culturally inclusive
- PC10.** communicate with everyone without any personal bias based on gender, disability, caste, religion, colour, sexual orientation and culture
- PC11.** recognize indicators of harassment and discrimination based on gender, disability, caste, religion, colour, sexual orientation and culture at workplace and follow organisational policy for reporting the same

Knowledge and Understanding (KU)



Qualification Pack

The individual on the job needs to know and understand:

- KU1.** legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions
- KU2.** reporting structure, inter-dependent functions, lines and procedures in the work area
- KU3.** relevant people and their responsibilities within the work area
- KU4.** escalation matrix and procedures for reporting work and employment related issues
- KU5.** key elements of active listening and assertive communication
- KU6.** importance of teamwork in organizational and individual success
- KU7.** ethics and disciplined behavior for professional success
- KU8.** expressing and addressing grievances appropriately and managing interpersonal conflict effectively
- KU9.** harassment and discrimination based on gender, disability, caste, religion and culture and how to recognize it.
- KU10.** organizational policy/ies for harassment and discrimination

Generic Skills (GS)

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

- GS1.** write clear and legible notes to self, colleagues and seniors to pass messages, keep records, prepare to-do lists, take down instructions
- GS2.** read basic terms and terminologies to accurately interpret work related documents, labels, supervisor instructions in the local language
- GS3.** interact with the supervisor appropriately (correct protocol and manner of speaking) in order to understand the basic requirements of the product, production plans and other associated requirements
- GS4.** display active listening skills while interacting with co-workers and other in the workplace
- GS5.** follow organization's rule-based decision-making process
- GS6.** use appropriate planning to maintain a smooth relationship with fellow team members
- GS7.** meet customer requirements
- GS8.** critically evaluate operation parameters in relation to system normality



Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Work effectively with others</i>	18	32	-	-
PC1. accept information and instructions from the supervisor and fellow workers and seek clarification when required	2	4	-	-
PC2. pass the information to the persons to all those concerns within agreed timeframe in a manner they can understand and confirm its receipt	1	4	-	-
PC3. help & assist fellow workers in performing their tasks in a positive manner so as to maximize efficiency	2	4	-	-
PC4. use appropriate tone, pitch and language while communicating to convey politeness, assertiveness, care and professionalism	4	6	-	-
PC5. listen attentively and respond appropriately while interacting with others at work	3	6	-	-
PC6. act responsibly and demonstrate disciplined behaviour at the workplace (Disciplined behaviour: Punctuality, completing tasks within agreed timescales, ensuring quality standards, not gossiping and wasting time, honesty, etc.)	3	5	-	-
PC7. escalate grievances and problems to the appropriate authority as per the organizational procedure to resolve them and avoid conflict	3	3	-	-
<i>Respect diversity</i>	16	24	-	-
PC8. respect gender diversity in the workplace	4	6	-	-
PC9. use respectful verbal, non-verbal and written communication that is gender, disability and culturally inclusive	4	6	-	-
PC10. communicate with everyone without any personal bias based on gender, disability, caste, religion, colour, sexual orientation and culture	4	6	-	-



Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. recognize indicators of harassment and discrimination based on gender, disability, caste, religion, colour, sexual orientation and culture at workplace and follow organisational policy for reporting the same	4	6	-	-
NOS Total	34	56	-	-



Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	PSS/N1336
NOS Name	Working effectively with others
Sector	Power
Sub-Sector	Generic
Occupation	Generic
NSQF Level	2
Credits	1
Version	2.0
Last Reviewed Date	22/10/2024
Next Review Date	22/10/2027
NSQC Clearance Date	22/10/2024

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.



Qualification Pack

Minimum Aggregate Passing % at QP Level : 50

(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
SGJ/N1702.Optimize resource utilization at workplace	13	26	-	-	39	5
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	10
PSS/N6001.Preparing for installation of house wiring and repairing of faults	30	70	-	-	100	20
PSS/N6003.Maintenance and repair of Household electrical gadgets	38	62	-	-	100	20
PSS/N6002.Installation of Electrical Appliances, Control Circuits & Protection Devices	31	69	-	-	100	25
PSS/N6005.Develop customer relationship	30	70	-	-	100	5
PSS/N1331.Apply basic health and safety practices for power related work	39	61	0	0	100	10
PSS/N1336.Working effectively with others	34	56	0	0	90	5
Total	235	444	0	0	679	100



Qualification Pack

Acronyms

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



Qualification Pack

Glossary

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



Qualification Pack

Knowledge and Understanding (KU)	<p>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.</p>
Organisational Context	<p>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.</p>
Technical Knowledge	<p>Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.</p>
Core Skills/ Generic Skills (GS)	<p>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.</p>
Electives	<p>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.</p>
Options	<p>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.</p>