

Qualification Pack



Mechanic (Electrical/ Electronics/Instrumentation)

QP Code: IES/Q1105

Version: 3.0

NSQF Level: 4

Infrastructure Equipment Skill Council || Jubilee Building – 2nd Floor, No.45, Museum Road
Bengaluru - 560025



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IES/Q1105: Mechanic (Electrical/ Electronics/Instrumentation)

Brief Job Description

Mechanic (Electrical/Electronics/Instrumentation) supports the equipment operation by conducting inspections and preventive maintenance. His job role involves skilled mechanical and electrical work such as installing, maintaining and repairing electrical and related equipment etc. in infrastructure equipment. He also provides guidance and on-the-job training to juniors.

Personal Attributes

This job requires the individual to work independently as well as in teams. He Should have analytical skills, problem solving attitude, high concentration levels. He should have good hand-eye coordination, good eyesight, no colour-blindness and should be able to complete precise and detailed work.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [IES/N1105: Carry out repair and maintenance of infrastructure equipments electrical/ electronic/instrumentation parts](#)
2. [IES/N7701: Carryout reporting and documentation](#)
3. [IES/N7602: Comply with Workshop Health and Safety Guidelines](#)
4. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Infrastructure Equipment
Sub-Sector	Equipment Service and spares
Occupation	Equipment Maintenance
Country	India
NSQF Level	4
Credits	14
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 7233.0701

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Minimum Educational Qualification & Experience	8th grade pass plus 2-year NTC plus 1 Year NAC OR 10th grade pass plus 1-year NTC/ NAC OR 10th grade pass with 2 Years of experience Relevant OR 10th grade pass and pursuing continuous schooling OR 11th grade pass
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	17/11/2025
NSQC Approval Date	17/11/2022
Version	3.0
Reference code on NQR	2022/IS/IESC/06800
NQR Version	3.0

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IES/N1105: Carry out repair and maintenance of infrastructure equipments electrical/ electronic/instrumentation parts

Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that need to be carried out for testing, diagnosing, repairing and maintaining Electrical/ Electronics/ Instrumentation

Scope

The scope covers the following :

- Breakdown Repair
- Maintenance Work

Elements and Performance Criteria

Breakdown repair

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

- PC1.** ascertain the circumstances leading to the breakdown and recent history of repairs and maintenance done on the electrical, electronic and instrumentation systems of the equipment
- PC2.** inspect the work area and ensure it is safe and clean with adequate lighting and ventilation and as per the safety regulations, to enable repairs to be carried out efficiently
- PC3.** inspect the machine for visible damages/deficiencies in the electrical, electronic and instrumentation systems
- PC4.** check all levels of fuel, coolant and oils in engine, hydraulic and transmission systems; top up if necessary
- PC5.** start the engine as per procedure and check running to confirm the defect/fault reported in the electrical, electronic and instrumentation systems
- PC6.** test the starting, charging, lighting and safety circuits sequentially using appropriate testing tools, aids like schematics and diagnostic equipment
- PC7.** test the electronic control systems and all instrument panels sequentially using appropriate testing tools, aids like schematics and diagnostic equipment
- PC8.** analyze and interpret the diagnostic results to identify the fault and its most likely causes as per the manufacturers service manual
- PC9.** ascertain the availability of necessary parts and consumables and prepare a proposed repair plan including approximate costing and time schedule for preliminary approval as applicable
- PC10.** remove the affected electrical system parts correctly without causing further damage to them and peripheral components
- PC11.** inspect the removed / disassembled parts, identify those that can be reused / repaired / replaced as applicable and finalize the work order including revised costing if necessary and obtain approval before commencing work

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- PC12.** replace or repair the affected parts as per procedure, test functionality on bench as applicable and refit / reassemble the same as per the manufacturers guidelines
- PC13.** start the engine as per procedure and test running to confirm the defect/fault has been rectified and all electrical, electronic and instrumentation systems are working as per the laid down specifications and parameters

Maintenance work PC

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

- PC14.** ascertain the applicable maintenance / service schedule and history of recent repairs and maintenance/service tasks done on the electrical, electronic and instrumentation systems
- PC15.** start the engine as per procedure and test performance / functionality of various electrical, electronic and instrumentation systems to corroborate with the operators feedback
- PC16.** ascertain the availability of necessary parts and consumables and prepare a tentative maintenance plan including costing and time schedule for approval as applicable
- PC17.** carry out all applicable maintenance/service tasks on the equipments electrical, electronic and instrumentation systems as per manufacturers specifications and procedures; ensuring only genuine and approved parts and consumables are used
- PC18.** start the equipment as per procedure and conduct a final test run to check the performance of all electrical, electronic and instrumentation systems is as per laid down specifications and parameters
- PC19.** monitor and guide as necessary the junior mechanics regularly to ensure quality and safety of work being carried out
- PC20.** dispose the defective parts, consumables and waste as per the organizational policies & environmental regulations
- PC21.** complete and submit periodic / final reports and relevant documentation as per the organizational policies and procedures

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organizations policies, guidelines and procedures related to breakdown repairs & maintenance services including reporting structure and escalation matrix
- KU2.** the organizations policies, guidelines and procedures related to workshop safety, personal health, security and environment
- KU3.** the facilities in the workshop to include location of standard and special tools, diagnostic and test equipment; their calibration and correct usage
- KU4.** the manufacturers workshop manual for servicing and repairs of the equipments electrical, electronics and instrumentation systems
- KU5.** the procedure for starting the machine, testing the electrical, electronics and instrumentation systems and stopping the engine as per manufacturers guidelines
- KU6.** the methodology to extract information from relevant systems of the equipment to assist in fault diagnosis
- KU7.** the techniques used to identify faults such as sensory information - sight, sound, smell, touch; aural, visual and functional tests and checks

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- KU8.** the correct usage of various testing tools and diagnostic equipment to investigate the fault in the equipments electrical, electronics and instrumentation systems
- KU9.** the procedure to remove components from the electrical, electronics and instrumentation systems without damaging it as well as the surrounding ones as per the manufacturers guidelines
- KU10.** the technique to lay the removed components out in a logical sequence to aid re-assembly and check them for wear and tear
- KU11.** the procedure to ascertain the availability of necessary parts and consumables, prepare a restoration plan including approximate costing and time schedule for approval
- KU12.** the procedure for carrying out repairs and service of the affected components as per the manufacturers guidelines
- KU13.** the procedure for checking the correct specs of the replacement parts like seals, gaskets, O rings, filters, belts and consumables such as grease and lubricants before usage / fitment
- KU14.** the procedure for reassembly of components, their fitment on to the equipment and conducting necessary functional tests
- KU15.** the procedure for carrying out all the tasks as specified in the maintenance / service schedule of the equipment for the electrical, electronics and instrumentation systems
- KU16.** the procedure for working out the requirement of replacement parts and consumables; their costing and placing orders
- KU17.** the technique to examine the defective components and used consumables to ascertain their condition and analyze causes if their state is not within acceptable limits and suggest remedial measures to enhance longevity
- KU18.** the procedure for disposal of replaced parts/components and waste material as per organizational policy and environmental regulations
- KU19.** the procedure for completing and submitting work executed documents and reports as per organizations policies
- KU20.** the methodology to guide and supervise junior mechanics to ensure quality and safety of work being carried out
- KU21.** the review mechanism for obtaining / giving feedback from/to the supervisor / customer on the standard and quality of work executed

Generic Skills (GS)

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

- GS1.** read and interpret signs, symbols, diagrams and decals both on the equipment and in the work-shop
- GS2.** read and understand O&M and workshop manuals including schematics, parts list, specs sheets and technical service bulletins to support work tasks
- GS3.** record all diagnostics procedures carried out, on the prescribed format, as recommended by the manufacturer
- GS4.** record details of all repairs and servicing carried out as recommended by the manufacturer, on the prescribed format
- GS5.** use correct terms/phrases while interacting with co-workers, supervisor and customers

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- GS6.** interact regularly with team members to enable tasks to be carried out efficiently and within the time schedule
- GS7.** interact confidently with customers to understand the problems and to seek clarifications as necessary
- GS8.** analyze the diagnosis results to decide on the restoration plan for the equipment in consultation with team members / supervisor
- GS9.** plan, prioritize and sequence operations to ensure completion within the laid down time schedule
- GS10.** evaluate progress of work regularly to assess delays and initiate remedial measures including timely escalation if beyond one's scope or ability
- GS11.** ensure quality service is delivered as committed to achieve high levels of customer satisfaction
- GS12.** follow up with supervisors / superiors on any unfavorable feedback received from customer

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Breakdown repair</i>	9	35	-	-
PC1. ascertain the circumstances leading to the breakdown and recent history of repairs and maintenance done on the electrical, electronic and instrumentation systems of the equipment	1	1	-	-
PC2. inspect the work area and ensure it is safe and clean with adequate lighting and ventilation and as per the safety regulations, to enable repairs to be carried out efficiently	1	2	-	-
PC3. inspect the machine for visible damages/deficiencies in the electrical, electronic and instrumentation systems	1	2	-	-
PC4. check all levels of fuel, coolant and oils in engine, hydraulic and transmission systems; top up if necessary	1	2	-	-
PC5. start the engine as per procedure and check running to confirm the defect/fault reported in the electrical, electronic and instrumentation systems	1	2	-	-
PC6. test the starting, charging, lighting and safety circuits sequentially using appropriate testing tools, aids like schematics and diagnostic equipment	1	4	-	-
PC7. test the electronic control systems and all instrument panels sequentially using appropriate testing tools, aids like schematics and diagnostic equipment	1	4	-	-
PC8. analyze and interpret the diagnostic results to identify the fault and its most likely causes as per the manufacturers service manual	-	4	-	-
PC9. ascertain the availability of necessary parts and consumables and prepare a proposed repair plan including approximate costing and time schedule for preliminary approval as applicable	-	3	-	-
PC10. remove the affected electrical system parts correctly without causing further damage to them and peripheral components	1	3	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. inspect the removed / disassembled parts, identify those that can be reused / repaired / replaced as applicable and finalize the work order including revised costing if necessary and obtain approval before commencing work	1	3	-	-
PC12. replace or repair the affected parts as per procedure, test functionality on bench as applicable and refit / reassemble the same as per the manufacturers guidelines	-	3	-	-
PC13. start the engine as per procedure and test running to confirm the defect/fault has been rectified and all electrical, electronic and instrumentation systems are working as per the laid down specifications and parameters	-	2	-	-
<i>Maintenance work PC</i>	6	15	-	-
PC14. ascertain the applicable maintenance / service schedule and history of recent repairs and maintenance/service tasks done on the electrical, electronic and instrumentation systems	1	2	-	-
PC15. start the engine as per procedure and test performance / functionality of various electrical, electronic and instrumentation systems to corroborate with the operators feedback	-	2	-	-
PC16. ascertain the availability of necessary parts and consumables and prepare a tentative maintenance plan including costing and time schedule for approval as applicable	1	3	-	-
PC17. carry out all applicable maintenance/service tasks on the equipments electrical, electronic and instrumentation systems as per manufacturers specifications and procedures; ensuring only genuine and approved parts and consumables are used	1	2	-	-
PC18. start the equipment as per procedure and conduct a final test run to check the performance of all electrical, electronic and instrumentation systems is as per laid down specifications and parameters	-	2	-	-
PC19. monitor and guide as necessary the junior mechanics regularly to ensure quality and safety of work being carried out	1	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC20. dispose the defective parts, consumables and waste as per the organizational policies & environmental regulations	1	1	-	-
PC21. complete and submit periodic / final reports and relevant documentation as per the organizational policies and procedures	1	1	-	-
NOS Total	15	50	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N1105
NOS Name	Carry out repair and maintenance of infrastructure equipments electrical/ electronic/instrumentation parts
Sector	Infrastructure Equipment
Sub-Sector	Equipment Service and spares
Occupation	Equipment Maintenance
NSQF Level	4
Credits	6
Version	3.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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IES/N7701: Carryout reporting and documentation

Description

This unit is about preparation of various documents and reporting of data / problems.

Scope

The scope covers the following :

- Reporting unsolved problems
- Preparing reports related to work done

Elements and Performance Criteria

Report unresolved problems

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

- PC1.** follow reporting procedure as per the policy laid down by employer /organisation
- PC2.** report and escalate problems / incidents as required in a timely manner as per procedure

Prepare reports related to field visits and work done

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

- PC3.** prepare list of parts and consumables that needs to be procured for carrying out the necessary breakdown repairs and scheduled maintenance/service tasks
- PC4.** prepare tentative repair / maintenance plan including approximate costing and time schedule for necessary approvals before commencing work
- PC5.** complete reports related to field/site visits and work carried out as per the time lines laid down
- PC6.** submit all documentation, correctly and accurately, in the prescribed formats as per the policy
- PC7.** present all documents to appropriate authorities for inspection as and when required as per proedures
- PC8.** identify all documentation related to the job that needs to be completed and its sequence thereof

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organisations policies and procedures for reporting and documentation to cover reporting structure and escalation matrix with timelines
- KU2.** templates of various reports and documents and guidelines for filling and maintaining them
- KU3.** methodology for collecting and collating information necessary to complete the documentation
- KU4.** importance of recording factually correct information with corroborative evidence as applicable

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Generic Skills (GS)

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

- GS1.** read and interpret signs, symbols, diagrams and decals both on the equipment and in the workshop
- GS2.** read and understand O&M, workshop manuals related to equipment service and repairs; parts manual and technical service bulletins
- GS3.** use correct terms/phrases while interacting with co-workers, supervisor
- GS4.** organize own work area to include reference manuals, documents and templates to enable timely submission of reports and returns
- GS5.** monitor progress of reports till finalization and in case of delays initiate remedial measures including timely escalation if beyond one's scope or ability.
- GS6.** build and maintain congenial and positive relationships with all team members and other stake holders
- GS7.** follow up with supervisors/superiors on any unfavorable feedback related to reporting and documentation

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Report unresolved problems</i>	2	1	-	-
PC1. follow reporting procedure as per the policy laid down by employer /organisation	1	-	-	-
PC2. report and escalate problems / incidents as required in a timely manner as per procedure	1	1	-	-
<i>Prepare reports related to field visits and work done</i>	4	8	-	-
PC3. prepare list of parts and consumables that needs to be procured for carrying out the necessary breakdown repairs and scheduled maintenance/service tasks	1	2	-	-
PC4. prepare tentative repair / maintenance plan including approximate costing and time schedule for necessary approvals before commencing work	1	2	-	-
PC5. complete reports related to field/site visits and work carried out as per the time lines laid down	1	2	-	-
PC6. submit all documentation, correctly and accurately, in the prescribed formats as per the policy	1	1	-	-
PC7. present all documents to appropriate authorities for inspection as and when required as per procedures	-	1	-	-
PC8. identify all documentation related to the job that needs to be completed and its sequence thereof	-	-	-	-
NOS Total	6	9	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N7701
NOS Name	Carryout reporting and documentation
Sector	Infrastructure Equipment
Sub-Sector	Equipment Service and spares
Occupation	Equipment Maintenance
NSQF Level	4
Credits	5
Version	3.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQF Clearance Date	17/11/2022

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IES/N7602: Comply with Workshop Health and Safety Guidelines

Description

This unit is about adhering to health and safety requirements at the service workshop during equipment maintenance.

Scope

The scope covers the following :

- Service workshop health and safety

Elements and Performance Criteria

Service workshop health and safety

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

- PC1.** comply with all latest/current workshop safety, personal health, security and environmental related regulations and guidelines
- PC2.** inspect the work area and ensure it is safe from hazards, clean and with adequate lighting and ventilation as applicable, to enable repairs to be carried out efficiently
- PC3.** use appropriate personal protective clothing and equipment for various tasks and work conditions as per regulations
- PC4.** lift or haul as necessary, various tools and equipment safely from stowage area to repair bay as per the laid down procedures
- PC5.** carry out all repairs and maintenance tasks safely and correctly as per the manufacturers workshop procedures and guidelines
- PC6.** store the tools and equipment, post usage, at the designated places and ensure they are not left behind in the repair bay
- PC7.** keep the work area free from clutter and spillage on a regular basis to maintain basic hygiene and cleanliness at all times
- PC8.** handle the storage and disposal of waste including hazardous materials as per the safety, health and environmental regulations
- PC9.** operate various types and grades of fire extinguishers, as per the laid down procedures
- PC10.** support in administering basic first aid at the spot and report to supervisor, as required, in case of an accident needing evacuation
- PC11.** respond promptly and appropriately to any accident / incident or emergency, within the limits of ones roles and responsibilities
- PC12.** report and record, as applicable, details related to operations, incidents or accidents, in a factually correct manner

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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- KU1.** organisations latest/current workshop safety, personal health, security and environmental related policies, regulations and guidelines
- KU2.** organisations reporting structure and contact details of personnel responsible for health, safety and environmental related matters
- KU3.** location of workshop stores for tools and equipment, first aid station and safe assembly points/areas in case of an emergency
- KU4.** contact details of personnel to be reached out to in case of emergencies or accidents/incidents including civic agencies like police, fire and hospital services
- KU5.** types, use and importance of personal protective equipment and clothing
- KU6.** various types of safety signs and warnings and their meaning
- KU7.** types of common hazards and risks at the workshop including fire, mechanical and electrical related
- KU8.** safe working practices with various workshop tools and equipment, and other facilities
- KU9.** safe working practices while carrying out various maintenance operations adhering to the manufacturers guidelines and procedures
- KU10.** procedure for safe lockdown/shutdown of machinery in case of an emergency in the workshop
- KU11.** guidelines for transport, storage and disposal of hazardous materials and waste
- KU12.** types of various fire extinguishers, their application and operating procedure
- KU13.** basic first aid treatment for common injuries in the workshop like cuts and bleeding, sprains and fractures, minor burns, eye injuries and electrical shock
- KU14.** reporting and documentation procedures related to health, safety, environmental and security matters
- KU15.** the ways to optimize the usage of materials and conservation of electricity
- KU16.** respect everyone without any personal bias like gender, disability, caste, religion, colour, sexual orientation and culture

Generic Skills (GS)

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

- GS1.** read and interpret signs, symbols, diagrams and decals both on the equipment and in the workshop
- GS2.** read and understand all safety manuals related to equipment service and repairs; and workshop equipment including facilities operation
- GS3.** read and understand all health and safety guidelines; environmental regulations and bulletins issued from time to time
- GS4.** use correct terms/phrases while interacting with team members and supervisor
- GS5.** give clear and concise instructions and advisories as applicable to team members and others to enable tasks to be completed safely and in time
- GS6.** organize own work area to include tools and equipment; time plan to minimize any risks related to health and safety
- GS7.** monitor progress of work regularly to assess delays and initiate remedial measures including timely escalation if beyond one's scope or ability



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- GS8.** build and maintain congenial and positive relationships with all team members and other stake holders
- GS9.** follow up with supervisors/superiors on any unfavorable feedback related to safety and health issues

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Service workshop health and safety</i>	5	15	-	-
PC1. comply with all latest/current workshop safety, personal health, security and environmental related regulations and guidelines	1	1	-	-
PC2. inspect the work area and ensure it is safe from hazards, clean and with adequate lighting and ventilation as applicable, to enable repairs to be carried out efficiently	1	2	-	-
PC3. use appropriate personal protective clothing and equipment for various tasks and work conditions as per regulations	1	1	-	-
PC4. lift or haul as necessary, various tools and equipment safely from stowage area to repair bay as per the laid down procedures	-	1	-	-
PC5. carry out all repairs and maintenance tasks safely and correctly as per the manufacturers workshop procedures and guidelines	1	2	-	-
PC6. store the tools and equipment, post usage, at the designated places and ensure they are not left behind in the repair bay	-	1	-	-
PC7. keep the work area free from clutter and spillage on a regular basis to maintain basic hygiene and cleanliness at all times	-	1	-	-
PC8. handle the storage and disposal of waste including hazardous materials as per the safety, health and environmental regulations	-	1	-	-
PC9. operate various types and grades of fire extinguishers, as per the laid down procedures	1	1	-	-
PC10. support in administering basic first aid at the spot and report to supervisor, as required, in case of an accident needing evacuation	-	1	-	-
PC11. respond promptly and appropriately to any accident / incident or emergency, within the limits of ones roles and responsibilities	-	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. report and record, as applicable, details related to operations, incidents or accidents, in a factually correct manner	-	1	-	-
NOS Total	5	15	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N7602
NOS Name	Comply with Workshop Health and Safety Guidelines
Sector	Infrastructure Equipment
Sub-Sector	Equipment Service and spares
Occupation	Equipment Maintenance
NSQF Level	4
Credits	2
Version	3.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQF Clearance Date	17/11/2022

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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

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- 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

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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	-	-	-	-

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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	NA
Next Review Date	27/05/2024
NSQC Clearance Date	27/05/2021

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 : 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
IES/N1105.Carry out repair and maintenance of infrastructure equipments electrical/ electronic/instrumentation parts	15	50	0	0	65	40
IES/N7701.Carryout reporting and documentation	6	9	0	0	15	20
IES/N7602.Comply with Workshop Health and Safety Guidelines	5	15	-	-	20	20
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	20
Total	46	104	-	-	150	100



Qualification Pack

Acronyms

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

Qualification Pack

Glossary

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

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Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.