

Qualification Pack



Supervisor Maintenance (Infrastructure Equipment)

QP Code: IES/Q1201

Version: 3.0

NSQF Level: 5

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



Qualification Pack

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IES/Q1201: Supervisor Maintenance (Infrastructure Equipment)

Brief Job Description

Coordinates and supervises the activities of maintenance staff engaged in maintaining and repairing of infrastructure equipment used for activities such as construction, earth moving, transporting material etc.

Personal Attributes

The individual should be able to direct individuals working under him and take decisions. He/she should be highly result oriented and have a service orientation. The individual should also be able to demonstrate technical competence with diagnostics. He/she should adhere to processes and be physically fit.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [IES/N1201: Supervise preventive maintenance and minor repair work](#)
2. [IES/N1202: Supervise corrective maintenance of equipment](#)
3. [IES/N7602: Comply with Workshop Health and Safety Guidelines](#)
4. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Infrastructure Equipment
Sub-Sector	Equipment Service and spares
Occupation	Managerial & Supervisory - Equipment Service and Spares
Country	India
NSQF Level	5
Credits	18
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 3122.5200 Supervisor Maintenance

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Minimum Educational Qualification & Experience	<p>Completed 1st year of UG (UG Certificate) OR Completed 2nd year diploma after 12th OR 12th grade Pass with 2 Years of experience Relevant OR 12th grade pass with 1 year NTC/ NAC OR Completed 3-year diploma (after 10th) with 1 Year of experience Relevant OR Previous relevant Qualification of NSQF Level (Level-4, IES/Q1101 - Mechanic - Engine with minimum education as 8th class pass) with 3 Years of experience Relevant</p>
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	On-the-job training on Quality Systems, Advanced diagnostics/ Maintenance related courses by OEMs
Minimum Job Entry Age	20 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/06796
NQR Version	3.0

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IES/N1201: Supervise preventive maintenance and minor repair work

Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for planning, supervision and documentation related to equipment maintenance.

Scope

The scope covers the following :

- Planning and resource allocation
- Safety, Health and Environment (SHE) adherence
- Maintenance work
- Effectiveness of maintenance work
- Documentation

Elements and Performance Criteria

Planning and resource allocation

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

- PC1.** prepare the preventive maintenance schedule and checklists as per operation and maintenance manual
- PC2.** communicate maintenance plan to all the stakeholders like site supervisor/ project manager/ maintenance manager/ labor in-charge/ material manager/ contract labor etc as per organizational protocol
- PC3.** arrange for procurement of machine / equipment parts whenever necessary as per organization protocol
- PC4.** make the availability of spares and consumables for repair work or raise indent for the same much before the preventive maintenance schedule
- PC5.** plan and schedule availability of mechanics, technicians, labor in adequate numbers to carry out preventive maintenance
- PC6.** arrange for inspection and validation, if all the tools used to monitor the functioning of the equipment are calibrated and certified by competent authority
- PC7.** planning and operationalization of the field workshop/ service, as required
- PC8.** supervise equipment commissioning/ installation process

Safety, Health and Environment (SHE) adherence

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

- PC9.** comply with all organizational guidelines, SHE policy and quality standards during equipment maintenance
- PC10.** supervise the enforcement of all HSE related guidelines in equipment maintenance
- PC11.** carry out periodic walk-through to ensure that the service/ field workshop area is clean and free from hazards as per the safety, health and environmental policy/ guidelines
- PC12.** supervise the storage, handling and disposal of waste based on environmental guidelines at the work place

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Maintenance work

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

- PC13.** share equipment wise checklists and work schedule with the mechanics to ensure correct type of service (daily, weekly, monthly, quarterly, half yearly and yearly)/ maintenance activities are completed
- PC14.** assist the manager in monitoring maintenance operations with regards to timelines and budgets
- PC15.** ensure that third party equipment installed at the work place; preventive maintenance as per agreed schedule/ annual maintenance contract with the vendor
- PC16.** help and guide the mechanics while they are carrying out the repairs, as required
- PC17.** check the workmanship of mechanics/ technicians and other personnel
- PC18.** ensure the faulty components are replaced / repaired on the site or sent to vendor for repair through material department

Effectiveness of maintenance work

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

- PC19.** assist the workshop / P&M manager in ensuring the quality of workmanship of third party vendors
- PC20.** check if the preventive maintenance work is complete as per the checklists provided to all the mechanics
- PC21.** get a sign-off from the end user of the equipment like site engineer and / or project head as per organizational protocol

Documentation

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

- PC22.** document the details of the vendors in log-books / organizational reports/ MIS/ vendors worksheets etc. as per organizational protocol
- PC23.** complete documentation applicable to the role like reports, preventive maintenance log-books, spare parts usage log-books, sign-off reports, management information reports and other reports as per the quality & reporting standards applicable to the organization
- PC24.** keep all the records in a way and at a place where it is easily accessible to the relevant personnel

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organizations procedures and guidelines related to breakdown & maintenance services
- KU2.** the performance standards & procedures followed by the organization
- KU3.** reporting structure in the organization
- KU4.** escalation matrix for reporting unresolved problems
- KU5.** timeframe in which the complaint/problem should be resolved
- KU6.** work goal and review mechanism with supervisor for obtaining / giving feedback related to performance process
- KU7.** location of tools and equipment
- KU8.** contact person in case of queries on procedure or equipment

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- KU9.** process sequence for commissioning / installation of equipment
- KU10.** contact details of the procurement team and process for procurement of equipment, spares and consumables
- KU11.** location and process for storage and disposal of waste material, as per the environmental policy
- KU12.** SHE / safety policy of the organization
- KU13.** standard operating procedure (SOP) of maintenance work in the department
- KU14.** quality / standards in operation in the organization
- KU15.** SHE or any other safety standards in operation in the organization
- KU16.** risk impact of maintenance operations
- KU17.** original equipment manufacturers guide book on product usage and repair
- KU18.** calibration of tools used to measure the performance of equipment
- KU19.** procedure to allocate job among a team of mechanics based on their abilities, skills and units in which a job can be divided
- KU20.** process and elements of setting up and operationalizing a field workshop
- KU21.** installation / commissioning process and stages for various types of p&m equipment
- KU22.** different she related processes to be carried out during operations
- KU23.** methods to enforce she policy guidelines in operations
- KU24.** safety risks and hazards at workshop and means to mitigate these
- KU25.** risk & impact of not doing preventive maintenance
- KU26.** escalation matrix for highlighting incidents / system failures / repeated failures/ probable failures / obsolescence etc
- KU27.** spare parts management and procurement process
- KU28.** method of preparing daily schedules and checklists for team members
- KU29.** review process for verifying correctness of work carried out
- KU30.** types of documents, records & reports prevalent in the organization
- KU31.** process of obtaining sign-off in the organization / from customers

Generic Skills (GS)

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

- GS1.** record any deviations / incidents as per prescribed norms
- GS2.** document and report any health and safety related incidents / accidents
- GS3.** read and comprehend basic english to read manuals of operations
- GS4.** read all organizational and equipment related health and safety manuals and documents
- GS5.** read instructions, guidelines/procedures/rules
- GS6.** give clear instructions to co-workers, subordinates others
- GS7.** make appropriate decisions pertaining to the concerned area of work with respect to intended work objective, span of authority, responsibility, laid down procedure and guidelines
- GS8.** work with supervisors/ team mates to carry out work related tasks



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- GS9.** plan work according to the required schedule and location
- GS10.** ensure all customer needs are assessed and every effort is made to provide satisfactory service
- GS11.** assess, review that all requests are effectively allocated
- GS12.** analyze, evaluate and apply the information gathered from observation, experience, reasoning or communication to act efficiently
- GS13.** examine, evaluate and apply knowledge acquired from observation, logic or convey in order to perform effectively

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Planning and resource allocation</i>	3	23	-	-
PC1. prepare the preventive maintenance schedule and checklists as per operation and maintenance manual	-	3	-	-
PC2. communicate maintenance plan to all the stakeholders like site supervisor/ project manager/ maintenance manager/ labor in-charge/ material manager/ contract labor etc as per organizational protocol	1	3	-	-
PC3. arrange for procurement of machine / equipment parts whenever necessary as per organization protocol	-	3	-	-
PC4. make the availability of spares and consumables for repair work or raise indent for the same much before the preventive maintenance schedule	1	3	-	-
PC5. plan and schedule availability of mechanics, technicians, labor in adequate numbers to carry out preventive maintenance	-	3	-	-
PC6. arrange for inspection and validation, if all the tools used to monitor the functioning of the equipment are calibrated and certified by competent authority	1	3	-	-
PC7. planning and operationalization of the field workshop/ service, as required	-	3	-	-
PC8. supervise equipment commissioning/ installation process	-	2	-	-
<i>Safety, Health and Environment (SHE) adherence</i>	2	9	-	-
PC9. comply with all organizational guidelines, SHE policy and quality standards during equipment maintenance	1	3	-	-
PC10. supervise the enforcement of all HSE related guidelines in equipment maintenance	-	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. carry out periodic walk-through to ensure that the service/ field workshop area is clean and free from hazards as per the safety, health and environmental policy/ guidelines	1	2	-	-
PC12. supervise the storage, handling and disposal of waste based on environmental guidelines at the work place	-	2	-	-
<i>Maintenance work</i>	3	12	-	-
PC13. share equipment wise checklists and work schedule with the mechanics to ensure correct type of service (daily, weekly, monthly, quarterly, half yearly and yearly)/ maintenance activities are completed	1	2	-	-
PC14. assist the manager in monitoring maintenance operations with regards to timelines and budgets	-	2	-	-
PC15. ensure that third party equipment installed at the work place; preventive maintenance as per agreed schedule/ annual maintenance contract with the vendor	1	2	-	-
PC16. help and guide the mechanics while they are carrying out the repairs, as required	-	2	-	-
PC17. check the workmanship of mechanics/ technicians and other personnel	-	2	-	-
PC18. ensure the faulty components are replaced / repaired on the site or sent to vendor for repair through material department	1	2	-	-
<i>Effectiveness of maintenance work</i>	1	6	-	-
PC19. assist the workshop / P&M manager in ensuring the quality of workmanship of third party vendors	-	2	-	-
PC20. check if the preventive maintenance work is complete as per the checklists provided to all the mechanics	-	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC21. get a sign-off from the end user of the equipment like site engineer and / or project head as per organizational protocol	1	2	-	-
<i>Documentation</i>	6	5	-	-
PC22. document the details of the vendors in log-books / organizational reports/ MIS/ vendors worksheets etc. as per organizational protocol	2	2	-	-
PC23. complete documentation applicable to the role like reports, preventive maintenance log-books, spare parts usage log-books, sign-off reports, management information reports and other reports as per the quality & reporting standards applicable to the organization	2	2	-	-
PC24. keep all the records in a way and at a place where it is easily accessible to the relevant personnel	2	1	-	-
NOS Total	15	55	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N1201
NOS Name	Supervise preventive maintenance and minor repair work
Sector	Infrastructure Equipment
Sub-Sector	Equipment Service and spares
Occupation	Managerial & Supervisory - Equipment Service and spares
NSQF Level	5
Credits	7
Version	3.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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IES/N1202: Supervise corrective maintenance of equipment

Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for supervising corrective maintenance of Plant and Machinery (P&M) equipment

Scope

The scope covers the following :

- Avoid unscheduled break-down work
- Documentation and Reporting

Elements and Performance Criteria

Avoid unscheduled break-down work

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

- PC1.** formulate in consultation with the P&M/ Workshop Maintenance Manager the system of maintenance cycle for Plant & machinery (P&M)
- PC2.** divide the manpower of mechanics and other support personnel into teams and make them responsible for planned and unplanned work, based on the frequency and severity of breakdowns
- PC3.** plan for natural and manmade contingencies
- PC4.** create a predictive tests and analysis such as pressure , temperature, wear & tear checks, oil leakage test, hydraulic systems check, engine stress and gas exhaust system tests, wire life assessments etc. in consultation and advice of manager
- PC5.** provide data to manager about key performance parameters (like mean time between break-downs, cost of maintenance, power consumption, water consumption, oil and gas consumption, manpower utilization etc) as per cma procedures
- PC6.** design a system by which the supervisor is informed about the break-down as soon as it occurs
- PC7.** identify the problem quickly by performing diagnostic breakdown analysis, study the equipment manuals
- PC8.** cordon off the area, switch off power source, move personnel to safe area, in-case of an emergency
- PC9.** deploy mechanics to address the break down, as per organization protocols
- PC10.** take immediate action so that the break down is rectified
- PC11.** run the equipment after the repair to ensure its working appropriately and safely
- PC12.** note down all the critical parameters of performance of the equipment post repair
- PC13.** take sign off from production/ operation/ project manager under whose jurisdiction the equipment is working

Documentation and Reporting

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

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- PC14.** give information and data to manager so as to make changes, if any, in the preventive maintenance schedule
- PC15.** ensure all the relevant stakeholders are informed about the rectification
- PC16.** ensure entries are made in log-books, ERP and other organization specified reports

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organizations procedures and guidelines related to breakdown & maintenance services
- KU2.** the performance standards & procedures followed in the organization
- KU3.** reporting structure in the organization
- KU4.** escalation matrix for reporting unresolved problems
- KU5.** time frame in which the complaint/problem should be resolved
- KU6.** work goal and review mechanism with supervisor for obtaining / giving feedback related to performance process
- KU7.** location and usage of special tools
- KU8.** contact person in case of queries on procedure or products
- KU9.** location and process for storage and disposal of waste material as per the environmental policy
- KU10.** safety policy of the company
- KU11.** the usage cycle of existing equipment and machinery
- KU12.** dimensions and types of plant & machinery (p&m) equipment deployed
- KU13.** design of existing static equipment
- KU14.** layouts of existing static equipment
- KU15.** drawings and manuals of moving equipment
- KU16.** manpower hiring & allocation policy as required
- KU17.** material purchase policy as applicable
- KU18.** the process to manage inventory for the various material procured
- KU19.** sequence of operation that needs to be performed
- KU20.** the method to extract and use information from the relevant areas to assist in the diagnosis
- KU21.** techniques to rectify the fault in the engine of the infrastructure equipment
- KU22.** the manufacturer's specification of the engine in use
- KU23.** techniques used to diagnose the faults (such as sensory information - sight, sound, smell, touch;, aural, visual and functional checks, taking measurements and use of equipment self-diagnostics) in the equipment
- KU24.** usage of various fault diagnostic equipment to investigate the problem in the equipment (such as multimeter, pressure gauges, thermal measuring equipment)
- KU25.** procedure to remove components from engine system without damage to the components or surrounding structure
- KU26.** usage of a various hand tools (such as spanners, sockets, screwdrivers, pliers, torque wrenches)

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- KU27.** methods to check that the tools and equipment to be used are correctly calibrated and are in a safe, tested and serviceable condition
- KU28.** method to use all tools correctly, check and store after use
- KU29.** technique to lay the removed components out in a logical sequence to aid re-assembly
- KU30.** methods to keep component parts together or in the order that they were removed
- KU31.** techniques of inspecting removed components of engine
- KU32.** technique to check for damage and wear in engine
- KU33.** the equipment used in the rectification operations (such as alignment tools, torque wrenches, presses)
- KU34.** methods to rectify the fault using methods such as component replacement, adjustments, repair and refitting techniques
- KU35.** technique to carry out visual, aural, functional and measurement tests
- KU36.** the expected outcomes of the tests being conducted
- KU37.** problems with the diagnosis and rectification operations
- KU38.** process of informing appropriate people of non-conformances
- KU39.** techniques to clean/service different parts of engine different jigs and fixtures used
- KU40.** method to fill different reports/templates followed in the organization

Generic Skills (GS)

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

- GS1.** record any deviations/ incidents as per prescribed norms
- GS2.** read and comprehend basic english to read manuals of operations
- GS3.** read instructions, guidelines/procedures/rules related to the worksite and equipment operations
- GS4.** give clear instructions to co-workers, subordinates and other personnel
- GS5.** make appropriate decisions pertaining to the concerned area of work with respect to intended work objective, span of authority, responsibility, laid down procedure and guidelines
- GS6.** think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s)
- GS7.** make an appropriate timely decision in responding to emergencies/accidents in line with organizational/ worksite guidelines
- GS8.** work with supervisors/ team mates to carry out work related tasks
- GS9.** plan work according to the required schedule and location
- GS10.** review and ensure regular maintenance on a daily basis before machine operations
- GS11.** ensure all customer needs are assessed and every effort is made to provide satisfactory service
- GS12.** assess and review that all customer requests are effectively allocated
- GS13.** refer problems outside area of responsibility to appropriate person
- GS14.** use the diagnosis results to take an appropriate decision on repair or replacement of component



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- GS15.** analyse and apply the information gathered from observation, experience, reasoning, or communication to act efficiently
- GS16.** evaluate the criticality of any damage to the appropriate equipment and take appropriate action
- GS17.** analyse, evaluate and apply the information gathered from observation, experience, reasoning or communication to act efficiently

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Avoid unscheduled break-down work</i>	9	34	-	-
PC1. formulate in consultation with the P&M/ Workshop Maintenance Manager the system of maintenance cycle for Plant & machinery (P&M)	-	3	-	-
PC2. divide the manpower of mechanics and other support personnel into teams and make them responsible for planned and unplanned work, based on the frequency and severity of breakdowns	-	3	-	-
PC3. plan for natural and manmade contingencies	1	3	-	-
PC4. create a predictive tests and analysis such as pressure , temperature, wear & tear checks, oil leakage test, hydraulic systems check, engine stress and gas exhaust system tests, wire life assessments etc. in consultation and advice of manager	1	3	-	-
PC5. provide data to manager about key performance parameters (like mean time between break -downs, cost of maintenance, power consumption, water consumption, oil and gas consumption, manpower utilization etc) as per cma procedures	1	3	-	-
PC6. design a system by which the supervisor is informed about the break-down as soon as it occurs	1	3	-	-
PC7. identify the problem quickly by performing diagnostic breakdown analysis, study the equipment manuals	1	3	-	-
PC8. cordon off the area, switch off power source, move personnel to safe area, in-case of an emergency	1	3	-	-
PC9. deploy mechanics to address the break down, as per organization protocols	-	2	-	-
PC10. take immediate action so that the break down is rectified	-	2	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. run the equipment after the repair to ensure its working appropriately and safely	1	2	-	-
PC12. note down all the critical parameters of performance of the equipment post repair	1	2	-	-
PC13. take sign off from production/ operation/ project manager under whose jurisdiction the equipment is working	1	2	-	-
<i>Documentation and Reporting</i>	1	6	-	-
PC14. give information and data to manager so as to make changes, if any, in the preventive maintenance schedule	1	2	-	-
PC15. ensure all the relevant stakeholders are informed about the rectification	-	2	-	-
PC16. ensure entries are made in log-books, ERP and other organization specified reports	-	2	-	-
NOS Total	10	40	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N1202
NOS Name	Supervise corrective maintenance of equipment
Sector	Infrastructure Equipment
Sub-Sector	Equipment Service and spares
Occupation	Managerial & Supervisory - Equipment Service and spares
NSQF Level	5
Credits	7
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

Qualification Pack

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

Description

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

Scope

The scope covers the following :

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

Elements and Performance Criteria

Introduction to Employability Skills

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

- PC1.** identify employability skills required for jobs in various industries
- PC2.** identify and explore learning and employability portals

Constitutional values - Citizenship

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

- PC3.** recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.
- PC4.** follow environmentally sustainable practices

Becoming a Professional in the 21st Century

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

- PC5.** recognize the significance of 21st Century Skills for employment
- PC6.** practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

Basic English Skills

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

Qualification Pack

- PC7.** use basic English for everyday conversation in different contexts, in person and over the telephone
- PC8.** read and understand routine information, notes, instructions, mails, letters etc. written in English
- PC9.** write short messages, notes, letters, e-mails etc. in English

Career Development & Goal Setting

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

- PC10.** understand the difference between job and career
- PC11.** prepare a career development plan with short- and long-term goals, based on aptitude

Communication Skills

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

- PC12.** follow verbal and non-verbal communication etiquette and active listening techniques in various settings
- PC13.** work collaboratively with others in a team

Diversity & Inclusion

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

- PC14.** communicate and behave appropriately with all genders and PwD
- PC15.** escalate any issues related to sexual harassment at workplace according to POSH Act

Financial and Legal Literacy

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

- PC16.** select financial institutions, products and services as per requirement
- PC17.** carry out offline and online financial transactions, safely and securely
- PC18.** identify common components of salary and compute income, expenses, taxes, investments etc
- PC19.** identify relevant rights and laws and use legal aids to fight against legal exploitation

Essential Digital Skills

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

- PC20.** operate digital devices and carry out basic internet operations securely and safely
- PC21.** use e- mail and social media platforms and virtual collaboration tools to work effectively
- PC22.** use basic features of word processor, spreadsheets, and presentations

Entrepreneurship

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

- PC23.** identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research
- PC24.** develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion
- PC25.** identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

Customer Service

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

- PC26.** identify different types of customers
- PC27.** identify and respond to customer requests and needs in a professional manner.

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PC28. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC29. create a professional Curriculum vitae (Résumé)

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

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

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

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

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

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

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

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

KU7. about effective communication

KU8. POSH Act

KU9. Gender sensitivity and inclusivity

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

KU11. how to compute income and expenditure

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

KU13. different legal rights and laws

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

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

KU16. how to identify business opportunities

KU17. types and needs of customers

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

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

Generic Skills (GS)

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

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

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

Qualification Pack

- GS3.** behave politely and appropriately with all
- GS4.** how to work in a virtual mode
- GS5.** perform calculations efficiently
- GS6.** solve problems effectively
- GS7.** pay attention to details
- GS8.** manage time efficiently
- GS9.** maintain hygiene and sanitization to avoid infection

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

Qualification Pack

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

Qualification Pack

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

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0102
NOS Name	Employability Skills (60 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	NA
Next Review Date	03/05/2026
NSQC Clearance Date	03/05/2023

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.

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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/N1201.Supervise preventive maintenance and minor repair work	15	55	-	-	70	40
IES/N1202.Supervise corrective maintenance of equipment	10	40	-	-	50	30
IES/N7602.Comply with Workshop Health and Safety Guidelines	5	15	-	-	20	15
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	0	0	50	15
Total	50	140	0	0	190	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.