

Qualification Pack



Junior Backhoe Operator

QP Code: IES/Q0102

Version: 3.0

NSQF Level: 3

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



Qualification Pack

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IES/Q0102: Junior Backhoe Operator

Brief Job Description

A junior backhoe operator assists the operator in driving and controlling the backhoe operations safely and efficiently. He assists the operator in backhoe operations and is responsible for conducting pre check operations and regular machine maintenance.

Personal Attributes

The job requires the individual to be extremely diligent and careful and have good hand eye coordination. Hard work and strong work ethics, courteous behavior with co workers are equally desirable. He should also be physically agile, strong, have good eye sight and not suffer from colour-blindness.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [IES/N0104: Assist in Carrying out pre checks of backhoe loader](#)
2. [IES/N0105: Assist in backhoe loader operations](#)
3. [IES/N0106: Assist in regular maintenance of the backhoe loader](#)
4. [IES/N7601: Comply with worksite health and safety](#)
5. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
Country	India
NSQF Level	3
Credits	10
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 8342.2101

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Minimum Educational Qualification & Experience	<p>Ability to read and write with 5 Years of experience Relevant OR 5th Class with 4 Years of experience Relevant OR 8th grade pass with 1 Year of experience Relevant OR 8th grade pass with 1 year NTC plus 1 year NAC OR 8th grade pass and pursuing continuous schooling in regular school with vocational subject</p>
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	Light Commercial Vehicle Driving License (LCV) is preferred
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/06797
NQR Version	3.0

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IES/N0104: Assist in Carrying out pre checks of backhoe loader

Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that need to be carried out to prepare the backhoe loader for a shift.

Scope

The scope covers the following :

- Assist in conducting pre-operation checks
- Assist in maintaining
- documentation and records

Elements and Performance Criteria

Assist in conducting pre operation checks

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

- PC1.** examine the body components for cracks and bearing wear visually
- PC2.** help in checking the boom and stick for dents and cracked welds
- PC3.** assist with the inspection of all ground-engaging tools to guarantee their stability
- PC4.** check that the oil levels in the engine, gearbox, radiant coolant, and brakes are in accordance with the manufacturer's recommendations
- PC5.** assist in checking differential and hydraulic oil levels
- PC6.** check the tension of the fan belt, the electrolyte level, and the terminal tightness
- PC7.** visually inspect the different controls, gauges, warning lights, and confirm that all safety and maintenance stickers are present
- PC8.** check load chart is displayed in cabin
- PC9.** regularly clean dust in the air filter bowl
- PC10.** drain water and sediment from the fuel tank
- PC11.** carry out inspections to verify that the parking brake, main horn, reverse horn, and headlight are in proper working order
- PC12.** grease all greasing pins and pivots points well
- PC13.** examine the compressor unit and all fittings and air lines
- PC14.** examine the clearance between the drawbar ball and socket, look for excessive free play, and correct as needed
- PC15.** make sure the locking bar is in place to keep the front and back chassis from shifting and creating a crushing zone (articulated machines only)
- PC16.** clean the footplates and steps to maintain them free of mud, dirt, and grease
- PC17.** before operating, walk thoroughly around the backhoe loader to ensure that no one is beneath or on the machine
- PC18.** get the log book of activities performed approved by the operator

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- PC19.** assist in maintaining logbook to record all activities performed before starting the backhoe loader
- PC20.** if a fault is found that is outside of the scope of the position, notify the operator immediately

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organizations procedures and guidelines related to backhoe loader operations
- KU2.** the company's performance criteria and processes
- KU3.** reporting structure in the company
- KU4.** escalation matrix for reporting unresolved problems
- KU5.** schedule for resolving the complaint/problem
- KU6.** work target and review mechanism with supervisor for obtaining/ giving feedback related to performance process
- KU7.** location of tools
- KU8.** contact person in case of queries on procedure or products
- KU9.** location and process for storage and disposal of waste material
- KU10.** safety policy of the company
- KU11.** responsibilities of the assigned job role
- KU12.** various backhoe loader and their uses and functions
- KU13.** introduction to the engine and transmission, as well as their use and purpose
- KU14.** principles of friction
- KU15.** steering mechanisms and correct way of steering on slopes
- KU16.** common types of signals and warning indicators
- KU17.** the relevance of greasing and oiling backhoe loader components that require routine lubrication
- KU18.** procedure of filling diesel, coolant in the machine
- KU19.** method of greasing and lubrication
- KU20.** optimal engine oil pressure, radiator coolant temperature
- KU21.** instrument panel, their location and operation
- KU22.** the various types of hand signals used on the site
- KU23.** controls, levers and switches in order to operate the backhoe loader properly
- KU24.** optimal working condition of compactor components
- KU25.** optimal engine oil pressure, radiator coolant temperature
- KU26.** visual inspections are performed ahead of time to detect damage, flaws, cracks or leaks

Generic Skills (GS)

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

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- GS1.** keep a record of any deviations or occurrences that do not conform to the specified standards
- 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.** when talking with your operator or other personnel, utilize the right technical words
- GS6.** decide when to conduct maintenance checks
- GS7.** work with supervisors / team mates to carry out work related tasks
- GS8.** plan work according to the required schedule and location
- GS9.** plan for cleaning and lubricating the backhoe loader every day
- GS10.** deliver first-rate service to ensure client satisfaction
- GS11.** report problems that you cannot resolve to appropriate authority
- GS12.** identify sources of support that can be availed for problem solving for various kinds of problems
- GS13.** identify 'cause and effect' relations in own area of work
- GS14.** apply balanced judgment to different situations

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assist in conducting pre operation checks</i>	20	55	-	-
PC1. examine the body components for cracks and bearing wear visually	1	3	-	-
PC2. help in checking the boom and stick for dents and cracked welds	1	3	-	-
PC3. assist with the inspection of all ground-engaging tools to guarantee their stability	1	3	-	-
PC4. check that the oil levels in the engine, gearbox, radiant coolant, and brakes are in accordance with the manufacturer's recommendations	1	3	-	-
PC5. assist in checking differential and hydraulic oil levels	1	3	-	-
PC6. check the tension of the fan belt, the electrolyte level, and the terminal tightness	1	3	-	-
PC7. visually inspect the different controls, gauges, warning lights, and confirm that all safety and maintenance stickers are present	-	3	-	-
PC8. check load chart is displayed in cabin	1	2	-	-
PC9. regularly clean dust in the air filter bowl	1	3	-	-
PC10. drain water and sediment from the fuel tank	1	3	-	-
PC11. carry out inspections to verify that the parking brake, main horn, reverse horn, and headlight are in proper working order	1	3	-	-
PC12. grease all greasing pins and pivots points well	-	3	-	-
PC13. examine the compressor unit and all fittings and air lines	1	3	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. examine the clearance between the drawbar ball and socket, look for excessive free play, and correct as needed	1	3	-	-
PC15. make sure the locking bar is in place to keep the front and back chassis from shifting and creating a crushing zone (articulated machines only)	1	3	-	-
PC16. clean the footplates and steps to maintain them free of mud, dirt, and grease	1	2	-	-
PC17. before operating, walk thoroughly around the backhoe loader to ensure that no one is beneath or on the machine	1	3	-	-
PC18. get the log book of activities performed approved by the operator	2	2	-	-
PC19. assist in maintaining logbook to record all activities performed before starting the backhoe loader	2	2	-	-
PC20. if a fault is found that is outside of the scope of the position, notify the operator immediately	1	2	-	-
NOS Total	20	55	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N0104
NOS Name	Assist in Carrying out pre checks of backhoe loader
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	3
Credits	2
Version	3.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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IES/N0105: Assist in backhoe loader operations

Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required for assisting in backhoe operations.

Scope

The scope covers the following :

- This unit/task covers the following:
- Assist in earth digging
- Assist in load lifting and dumping

Elements and Performance Criteria

Assist in earth digging

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

- PC1.** examine the jobsite for loose soil, concealed deep ditches, or marshy spots where the excavator might become trapped
- PC2.** carry out and help with all pre-use and operating inspections
- PC3.** support in calculating machine speed and direction in accordance with the given function
- PC4.** assist in ascertaining the right location to begin operations
- PC5.** regularly review dangers and risks in order to guarantee the safety of oneself, other employees, plant, and equipment
- PC6.** during the digging operation, eliminate any obstructions that may arise
- PC7.** assist in modifying the operating technique to meet changing work conditions
- PC8.** help with the use of stabilizers to keep the machinery totally stationary while digging

Assist in load lifting and dumping

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

- PC9.** assist the operator to select, attach and apply slings and lifting gear in accordance with safe working load requirements
- PC10.** assist in positioning and locating machinery to ensure stability to effectively shift materials according to job specifications
- PC11.** help the operator in properly and effectively shifting the weight
- PC12.** aid with the movement of the load by employing hand / audible / communication signals
- PC13.** assist in removing attachments after use
- PC14.** clean and store removed attachments

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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- KU1.** responsibilities of the assigned job role
- KU2.** job specific documents e.g. daily maintenance checklist and importance of the same
- KU3.** a list of typical occupational hazards and techniques for dealing with them
- KU4.** safety policy of the company
- KU5.** emergency organization of the specific work site
- KU6.** the dangers and consequences of failing to follow clearly specified procedures/work instructions
- KU7.** the performance standards & procedures followed in the company
- KU8.** reporting structure in the company
- KU9.** escalation matrix for reporting unresolved problems
- KU10.** schedule for resolving the complaint/problem
- KU11.** the consequences of process delays for the firm
- KU12.** cost of equipment and loss for the company that result from damage of equipment and direct/ indirect cost of accidents
- KU13.** work goal and review procedure with supervisor for obtaining/giving feedback on performance process
- KU14.** location of tools
- KU15.** if you've any questions about the procedure or the goods, please contact the respect individual
- KU16.** location and procedure for waste storage and disposal
- KU17.** different types of backhoe loaders and their applications
- KU18.** introduction to the engine and transmission, as well as their use and purpose
- KU19.** principles of friction
- KU20.** steering mechanisms and correct way of steering on slopes
- KU21.** significance of greasing and oiling parts of the backhoe
- KU22.** the instrument panel, its position, and its functionality
- KU23.** optimal working condition of backhoe loaders
- KU24.** optimal engine oil pressure, radiator coolant temperature
- KU25.** the need of stabilizers when digging
- KU26.** the various attachments, their uses, and functions (grappler fork, buckets, side shift forks, sweepers, crane hooks, rock breaker etc)
- KU27.** all signs, warnings, and other emergency signals
- KU28.** proper backhoe loader maintenance techniques
- KU29.** the emergency button process and necessity

Generic Skills (GS)

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

- GS1.** keep a record of any deviations or occurrences that do not conform to the specified standards
- GS2.** read and comprehend basic english to read manuals of operations

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- GS3.** understand stakes and signs on the road and on the job site
- GS4.** read instructions, guidelines/ procedures/ rules related to the worksite and equipment operations
- GS5.** communicate efficiently with operators to explain instructions and other concerns
- GS6.** when talking with your supervisor, utilize the right technical words
- GS7.** examine the excavator for any damage or defective components and take appropriate measures
- GS8.** carry out job duties in accordance with the operator's/other supervisors' directions and deadlines
- GS9.** plan work according to the required schedule and location
- GS10.** deliver first-class service to ensure client satisfaction
- GS11.** report problems that you cannot resolve to appropriate authority
- GS12.** identify sources of assistance that may be used to solve challenges of various types
- GS13.** judge when to seek assistance from supervisor
- GS14.** identify sources of support that can be availed for problem solving for various kinds of problems
- GS15.** examine, evaluate, and apply knowledge acquired from observation, experience, logic, or communication in order to act efficiently

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assist in earth digging</i>	8	37	-	-
PC1. examine the jobsite for loose soil, concealed deep ditches, or marshy spots where the excavator might become trapped	1	5	-	-
PC2. carry out and help with all pre-use and operating inspections	1	4	-	-
PC3. support in calculating machine speed and direction in accordance with the given function	1	5	-	-
PC4. assist in ascertaining the right location to begin operations	1	4	-	-
PC5. regularly review dangers and risks in order to guarantee the safety of oneself, other employees, plant, and equipment	1	4	-	-
PC6. during the digging operation, eliminate any obstructions that may arise	1	5	-	-
PC7. assist in modifying the operating technique to meet changing work conditions	1	5	-	-
PC8. help with the use of stabilizers to keep the machinery totally stationary while digging	1	5	-	-
<i>Assist in load lifting and dumping</i>	6	24	-	-
PC9. assist the operator to select, attach and apply slings and lifting gear in accordance with safe working load requirements	1	4	-	-
PC10. assist in positioning and locating machinery to ensure stability to effectively shift materials according to job specifications	1	4	-	-
PC11. help the operator in properly and effectively shifting the weight	1	4	-	-
PC12. aid with the movement of the load by employing hand / audible / communication signals	1	4	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. assist in removing attachments after use	1	4	-	-
PC14. clean and store removed attachments	1	4	-	-
NOS Total	14	61	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N0105
NOS Name	Assist in backhoe loader operations
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	3
Credits	4
Version	3.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQF Clearance Date	17/11/2022

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IES/N0106: Assist in regular maintenance of the backhoe loader

Description

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required for assisting the operator in routine maintenance of the backhoe loader.

Scope

The scope covers the following :

- This unit/task covers the following:
- Assist in routine maintenance
- Documentation and Reporting

Elements and Performance Criteria

Assist in routine maintenance

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

- PC1.** regularly clean the dust in the air filter bowl
- PC2.** clean the footplates and steps to maintain them free of mud, dirt, and grease
- PC3.** refill coolants, lubricants and fluids daily
- PC4.** every day, lubricate all greasing pins and pivot points
- PC5.** check battery levels and terminal condition, and tighten the loose terminals
- PC6.** check and maintain the tyre rims, air pressure, wheel nuts, and treads according to the manufacturer's recommendations
- PC7.** before performing any repair, be certain that the machine is on firm and level ground. Keep note of machine running hours to determine the best service plan
- PC8.** make sure that no engine repair is conducted while the engine is running or remains hot
- PC9.** assess when the problem is beyond his competence and report the problem to the operator
- PC10.** handle and dispose waste based on environmental guidelines at the work place

Documentation and Reporting

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

- PC11.** adhere to the reporting procedures established by the employer

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** job specific documents e.g. daily maintenance checklist and importance of the same
- KU2.** a list of typical occupational hazards and techniques for dealing with them
- KU3.** safety policy of the company
- KU4.** emergency organization of the specific work site
- KU5.** risk and impact of not following defined procedures/ work instructions

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- KU6.** the company's performance criteria and processes
- KU7.** reporting structure in the company
- KU8.** escalation matrix for reporting unresolved problems
- KU9.** schedule for resolving the complaint/problem
- KU10.** the consequences of process delays for the firm
- KU11.** cost of equipment and loss for the company that result from damage of equipment and direct/ indirect cost of accidents
- KU12.** work objective and review method with supervisor for obtaining/giving feedback on performance process
- KU13.** location of tools
- KU14.** if you have any questions about the procedure or the goods, please contact the administrator
- KU15.** location and process for storage and disposal of waste material
- KU16.** responsibilities of the assigned job role
- KU17.** control and switches needed to operate the backhoe appropriately
- KU18.** the fundamental physics and mechanics at work in the different operations of the backhoe loader
- KU19.** common defects and general causes of breakdown
- KU20.** response to emergency situations
- KU21.** the optimal levels of control indicators e.g. fuel gauge, engine oil pressure and temperature
- KU22.** potential causes of any unusual noises coming from the engine

Generic Skills (GS)

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

- GS1.** keep record of any deviations or occurrences that do not conform to the specified standards
- 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.** when talking with your operator or other personnel, utilize the right technical words
- GS6.** decide when to conduct maintenance checks
- GS7.** evaluate the decision and conduct basic trouble shooting
- GS8.** work with supervisors/ team mates to carry out work related tasks
- GS9.** plan work according to the required schedule and location
- GS10.** plan for regular maintenance on a daily basis before machine operations
- GS11.** deliver first-class service to ensure client satisfaction
- GS12.** report problems that you cannot resolve to appropriate authority
- GS13.** identify sources of support that can be availed for problem solving for various kinds of problems
- GS14.** discover when to seek assistance from senior



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- GS15.** check for damages and diagnose common problems in the backhoe loader and take relevant action
- GS16.** apply balanced judgment to different situations

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Assist in routine maintenance</i>	10	30	-	-
PC1. regularly clean the dust in the air filter bowl	1	3	-	-
PC2. clean the footplates and steps to maintain them free of mud, dirt, and grease	1	3	-	-
PC3. refill coolants, lubricants and fluids daily	1	3	-	-
PC4. every day, lubricate all greasing pins and pivot points	1	3	-	-
PC5. check battery levels and terminal condition, and tighten the loose terminals	1	3	-	-
PC6. check and maintain the tyre rims, air pressure, wheel nuts, and treads according to the manufacturer's recommendations	1	3	-	-
PC7. before performing any repair, be certain that the machine is on firm and level ground. Keep note of machine running hours to determine the best service plan	1	3	-	-
PC8. make sure that no engine repair is conducted while the engine is running or remains hot	1	3	-	-
PC9. assess when the problem is beyond his competence and report the problem to the operator	2	3	-	-
PC10. handle and dispose waste based on environmental guidelines at the work place	-	3	-	-
<i>Documentation and Reporting</i>	5	5	-	-
PC11. adhere to the reporting procedures established by the employer	5	5	-	-
NOS Total	15	35	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N0106
NOS Name	Assist in regular maintenance of the backhoe loader
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	3
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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IES/N7601: Comply with worksite health and safety

Description

This unit is about adhering to health and safety requirements at the worksite during equipment operations.

Scope

The scope covers the following :

- Worksite health and safety

Elements and Performance Criteria

Worksite health and safety

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

- PC1.** Comply with safety, health, security and environment related regulations/guidelines at the work site
- PC2.** use personal protective equipment (ppe) and other safety gear as applicable to the equipment and the worksite
- PC3.** Follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at risk
- PC4.** Carry out operations as per the manufacturer's and worksite related health and safety guidelines
- PC5.** Handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines
- PC6.** operate various grades of fire extinguishers, as applicable
- PC7.** support in administering basic first aid and report to concerned team members, as required, in case of an accident
- PC8.** respond promptly and appropriately to an accident/ incident or emergency, within limits of your role and responsibility
- PC9.** record and report details related to operations, incidents or accidents, as applicable

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** health, safety, environmental (HSE) and security related policies/guidelines of the organization and the worksite and its importance
- KU2.** personnel responsible for health, safety and environment (HSE) related matters and their contact details
- KU3.** location of worksite storage, she team and safe assembly points
- KU4.** reporting and documentation procedures for HSE and security matters
- KU5.** manufacturers guidelines related to health and safety requirements

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- KU6.** common types of health, safety, environment and security risks related to the worksite and operations
- KU7.** types, use and importance of personal protective equipment (PPE) and other safety gear
- KU8.** safe working practices to avoid common hazards and risks
- KU9.** guidelines for transport, storage and disposal of hazardous materials and waste
- KU10.** types of common hazards and risks at the worksite including fire, electrical, gas emergencies, accidents, incidents, structure collapse, machine breakdown
- KU11.** knowledge of safe lockdown/stop of machinery use in case of emergencies and incidents/accidents
- KU12.** types of fire extinguishers and their use
- KU13.** common injuries and appropriate basic first aid treatment e.g. electrical shock, bleeding, wounds, fractures, minor burns, eye injuries

Generic Skills (GS)

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

- GS1.** document and report any health and safety related incidents/accidents
- GS2.** read and comprehend basic English to read manuals of operations
- GS3.** read all organizational and equipment related health and safety manuals and documents
- GS4.** read instructions, guidelines / procedures /rules related to the worksite and equipment operations
- GS5.** Give clear instructions to co-workers, subordinates and other personnel
- GS6.** Use correct technical terms while interacting with supervisor
- GS7.** Make an appropriate timely decision in responding to emergencies/accidents in line with organizational/worksite guidelines
- GS8.** Use correct PPE and other safety gear while at the worksite
- GS9.** Work with supervisors/ team mates to carry out work related tasks
- GS10.** Plan work according to the required schedule and location
- GS11.** Build and maintain positive and effective relationships with colleagues and customers
- GS12.** Seek appropriate assistance from other sources to resolve problems
- GS13.** Assess the intensity of the fire accident and operate fire extinguishers
- GS14.** 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>Worksite health and safety</i>	5	10	-	-
PC1. Comply with safety, health, security and environment related regulations/guidelines at the work site	0.5	1	-	-
PC2. use personal protective equipment (ppe) and other safety gear as applicable to the equipment and the worksite	0.5	1	-	-
PC3. Follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at risk	0.5	1	-	-
PC4. Carry out operations as per the manufacturer's and worksite related health and safety guidelines	0.5	1	-	-
PC5. Handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines	1	1	-	-
PC6. operate various grades of fire extinguishers, as applicable	0.5	2	-	-
PC7. support in administering basic first aid and report to concerned team members, as required, in case of an accident	0.5	1	-	-
PC8. respond promptly and appropriately to an accident/ incident or emergency, within limits of your role and responsibility	0.5	1	-	-
PC9. record and report details related to operations, incidents or accidents, as applicable	0.5	1	-	-
NOS Total	5	10	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	IES/N7601
NOS Name	Comply with worksite health and safety
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	4
Credits	1
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

Qualification Pack

Diversity & Inclusion

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

PC7. communicate and behave appropriately with all genders and PwD

PC8. report any issues related to sexual harassment

Financial and Legal Literacy

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

PC9. use various financial products and services safely and securely

PC10. calculate income, expenses, savings etc.

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

Essential Digital Skills

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

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

PC13. use internet and social media platforms securely and safely

Entrepreneurship

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

PC14. identify and assess opportunities for potential business

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

Customer Service

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

PC16. identify different types of customers

PC17. identify customer needs and address them appropriately

PC18. follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

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

PC19. create a basic biodata

PC20. search for suitable jobs and apply

PC21. identify and register apprenticeship opportunities as per requirement

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. need for employability skills

KU2. various constitutional and personal values

KU3. different environmentally sustainable practices and their importance

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

KU5. how to use basic spoken English language

KU6. Do and dont of effective communication

KU7. inclusivity and its importance

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

KU9. different types of financial products and services

Qualification Pack

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

Generic Skills (GS)

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

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

Qualification Pack

Assessment Criteria

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

Qualification Pack

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

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0101
NOS Name	Employability Skills (30 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	2
Credits	1
Version	1.0
Last Reviewed Date	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/N0104.Assist in Carrying out pre checks of backhoe loader	20	55	-	-	75	30
IES/N0105.Assist in backhoe loader operations	14	61	-	-	75	20
IES/N0106.Assist in regular maintenance of the backhoe loader	15	35	-	-	50	20
IES/N7601.Comply with worksite health and safety	5	10	-	-	15	15
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	15
Total	74	191	-	-	265	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.