









Junior Tower Crane Operator/Signalman

QP Code: IES/Q0123

Version: 3.0

NSQF Level: 3

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









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IES/Q0123: Junior Tower Crane Operator/Signalman

Brief Job Description

A junior tower crane operator/signalman in the work site is responsible for assisting the tower crane operators in loading and unloading of the materials. He provides directions for maneuvering the crane to the load lifting and releasing area. He is also responsible for safety during the crane operations.

Personal Attributes

The job requires an individual to be physically agile, strong and should have good eye sight. He should constantly be in contact with the operator and should maintain safety activities during the operations. He should possess basic numeracal skills and is required to be mentally alert at all times.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- 1. IES/N0183: Assist in pre-lifting operations
- 2. <u>IES/N0168</u>: Assist in tower crane operations
- 3. <u>IES/N0169</u>: Assist in regular maintenance of the tower crane
- 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-2015/8343.0700 Tower crane Operator









Minimum Educational Qualification & Experience	Ability to read and write with 5 Years of experience OR 5th Class with 4 Years of experience 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
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	NA
Next Review Date	17/11/2025
NSQC Approval Date	17/11/2022
Version	3.0
Reference code on NQR	2022/IS/IESC/06791
NQR Version	3.0









IES/N0183: Assist in pre-lifting operations

Description

This unit provides insight into activities required to be performed before lifting the load using crane

Scope

The scope covers the following:

• Pre-lifting operations

Elements and Performance Criteria

Pre-lifting operations

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

- PC1. check for availability of lifting gears, tools and tackles prior to starting lifting works
- **PC2.** at the construction site, choose and apply adequate rigging gears for heavy material movement for structural components
- **PC3.** check and double-check that the load is properly rigged to the sling according to the load's specifications
- **PC4.** examine wire rope slings, webbing slings and chain slings for obstructions to lifting during crane operations
- **PC5.** ensure that the equipment's structural components and assembly are located away from any above power lines or service lines
- **PC6.** examine the work environment for barricading, signs and the availability of needed PPEs, as specified by standard practise
- **PC7.** determine the weight of the load and the centre of gravity based on the weight of the load
- **PC8.** examine the location for blind spots and assess the clearance of the swing route
- **PC9.** set up and test communications for safe lifting operations with the crane operator
- **PC10.** prepare base for lifting equipment and load to be lifted as per requirement and instruction from the supervisor

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** the organization's operations, maintenance and safety policies
- **KU2.** the company's operating standards and processes in
- **KU3.** schedule for resolving the complaint/problem
- **KU4.** reporting structure of the company
- **KU5.** location and process for storage and disposal of waste material
- **KU6.** location and procedure for trash storage and disposal
- **KU7.** basic measuring, geometry and arithmetic calculation concepts









- **KU8.** linear measurement unit conversion
- **KU9.** hand tools necessary for material lifting activity and its application
- **KU10.** required nature of base level and compaction required for equipment during lifting
- **KU11.** technique for guiding a suspended item to the site of construction using tag lines
- **KU12.** the fundamental functioning mechanism of weight lifting equipment such as cranes, winches and so on
- **KU13.** lifting tool and tackle specifications based on load lifting requirements

Generic Skills (GS)

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

- **GS1.** record information/observations on activities/incidents in accordance with the established standards
- **GS2.** read and understand basic signs, symbols, graphs, charts and decals on equipment and at the job site
- **GS3.** read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
- **GS4.** in interacting with coworkers and supervisor, utilise suitable technical terms/phrases
- **GS5.** efficiently explain/instruct other team members in a clear and concise way
- **GS6.** pay close attention to and comprehend the questions/comments offered by other team members
- **GS7.** determine when to escalate the problem and seek assistance if it is out of scope
- **GS8.** prioritise and plan equipment repair to suit operating demands
- **GS9.** plan and organise the work schedule in collaboration with the rest of the team and the supervisor
- **GS10.** execute the duties efficiently within the time limit given and within the quality standards set; with minimum supervision
- **GS11.** ensure quality service is delivered as committed to achieve high levels of customer satisfaction
- **GS12.** analyse potential solutions and take necessary corrective steps and activities
- **GS13.** utilise common sense and reasoning abilities to determine the source of delays and execution issues
- **GS14.** apply knowledge and judgement gained via experience and awareness to efficiently carry out activities









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Pre-lifting operations	10	25	-	-
PC1. check for availability of lifting gears, tools and tackles prior to starting lifting works	1	2	-	-
PC2. at the construction site, choose and apply adequate rigging gears for heavy material movement for structural components	1	3	-	-
PC3. check and double-check that the load is properly rigged to the sling according to the load's specifications	1	2	-	-
PC4. examine wire rope slings, webbing slings and chain slings for obstructions to lifting during crane operations	1	3	-	-
PC5. ensure that the equipment's structural components and assembly are located away from any above power lines or service lines	1	3	-	-
PC6. examine the work environment for barricading, signs and the availability of needed PPEs, as specified by standard practise	1	3	-	-
PC7. determine the weight of the load and the centre of gravity based on the weight of the load	1	2	-	-
PC8. examine the location for blind spots and assess the clearance of the swing route	1	3	-	-
PC9. set up and test communications for safe lifting operations with the crane operator	1	2	-	-
PC10. prepare base for lifting equipment and load to be lifted as per requirement and instruction from the supervisor	1	2	-	-
NOS Total	10	25	-	-









National Occupational Standards (NOS) Parameters

NOS Code	IES/N0183
NOS Name	Assist in pre-lifting operations
Sector	Infrastructure Equipment
Sub-Sector	Equipment Operations
Occupation	Operator
NSQF Level	3
Credits	2
Version	1.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022









IES/N0168: Assist in tower crane operations

Description

This unit gives an insight into the activities that need to be performed by the signalman during the crane operations

Scope

The scope covers the following:

Tower crane operations

Elements and Performance Criteria

Tower Crane Operations

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

- **PC1.** analyse the load characteristics including centre of gravity and lifting points to determine the method of slinging
- **PC2.** communicate with the crane operator through lifting and maneuvering the load using the communication device or by hand signalling
- **PC3.** before and during the lift, identify and double-check the load's route, including distances, clearances and landing location
- **PC4.** guarantee load balance and stability by constantly monitoring the load during the process
- **PC5.** while the cargo is landing, communicate with the crane operator and others on the jobsite
- **PC6.** construct a basis for material unloading at the jobsite with the supervisor and other workers
- **PC7.** assist the site supervisor to cordon off lifting and lowering area using barricades, where applicable, according to lifting plan requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- **KU1.** the organization's operational, maintenance and safety policies
- **KU2.** the operational standards & procedures followed in the company
- **KU3.** reporting structure of the company
- **KU4.** location of specialized tools and the equipment
- **KU5.** location and procedure for trash storage and disposal
- **KU6.** contact person/area in case of emergency
- **KU7.** crane technical specifications, features and performance
- **KU8.** tower Crane equipment, its limitations and all the dynamics involved in crane and boom movement and lifting
- **KU9.** factors that affect equipment stability, such as ground and supporting conditions









- **KU10.** actual and potential risks include overhead utilities and guide wires, as well as other equipment, employees and automobile traffic
- **KU11.** to avoid damage, safety precautions must be taken in the event of an emergency
- **KU12.** personnel positions on-site, such as supervisor, operator and others

Generic Skills (GS)

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

- **GS1.** record information/observations on activities/incidents in accordance with the established standards
- **GS2.** read and understand basic signs, symbols, graphs, charts and decals on equipment and at the job site
- **GS3.** read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
- **GS4.** in interacting with coworkers and supervisor, utilise suitable technical terms/phrases
- **GS5.** efficiently explain/instruct other team members in a clear and concise way
- **GS6.** pay close attention to and comprehend the questions/comments offered by other team members
- **GS7.** determine when to escalate the problem and seek assistance if it is out of scope
- **GS8.** prioritise and plan equipment repair to suit operating demands
- **GS9.** plan and organise the work schedule in collaboration with the rest of the team and the supervisor
- **GS10.** execute the duties efficiently within the time limit given and within the quality standards set; with minimum supervision
- **GS11.** ensure quality service is delivered as committed to achieve high levels of customer satisfaction
- **GS12.** analyse potential solutions and take necessary corrective steps and activities
- **GS13.** utilise common sense and reasoning abilities to determine the source of delays and execution issues
- **GS14.** apply knowledge and judgement gained via experience and awareness to efficiently carry out activities









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Tower Crane Operations	10	20	-	-
PC1. analyse the load characteristics including centre of gravity and lifting points to determine the method of slinging	2	3	-	-
PC2. communicate with the crane operator through lifting and maneuvering the load using the communication device or by hand signalling	2	3	-	-
PC3. before and during the lift, identify and double-check the load's route, including distances, clearances and landing location	2	3	-	-
PC4. guarantee load balance and stability by constantly monitoring the load during the process	1	3	-	-
PC5. while the cargo is landing, communicate with the crane operator and others on the jobsite	1	3	-	-
PC6. construct a basis for material unloading at the jobsite with the supervisor and other workers	1	3	-	-
PC7. assist the site supervisor to cordon off lifting and lowering area using barricades, where applicable, according to lifting plan requirements	1	2	-	-
NOS Total	10	20	-	-









National Occupational Standards (NOS) Parameters

NOS Code	IES/N0168
NOS Name	Assist in tower crane 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
NSQC Clearance Date	17/11/2022









IES/N0169: Assist in regular maintenance of the tower crane

Description

This unit provides insight into activities that are required for performing routine maintenance and troubleshooting of a tower crane.

Scope

The scope covers the following:

- Routine maintenance
- · Repair and troubleshooting
- Documentation and reporting

Elements and Performance Criteria

Routine maintenance

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

- **PC1.** assist in the replenishment of coolants, lubricants and fluids in accordance with the machine's operation manual
- **PC2.** assist in regularly greasing all greasing pins, trolley pins, hoist and rope and slewing bolts based on machine usage
- **PC3.** service lubrication system, electrical service system, hoisting system and stabilising system in accordance with the operation manual
- **PC4.** service lib/boom and mast as directed by the operator/supervisor
- PC5. check the battery levels and the condition of the terminals and make adjustments as needed
- **PC6.** after using the tools, return them to their proper location in accordance with the organization's policies

Repair and troubleshooting

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

- **PC7.** ensure the main power is turned off from panel completely before carrying out maintenance work
- **PC8.** while troubleshooting, utilise suitable tools
- **PC9.** if a fault is found that is outside the scope of the position, notify the operator/supervisor immediately
- **PC10.** dispose waste as per the guidelines of the site/ organization

Reporting and documentation

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

- **PC11.** adhere to the reporting procedures established by the employer
- **PC12.** complete all documents in accordance with the required requirements on time

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:









- **KU1.** the organization's operational, maintenance and safety policies
- **KU2.** the operational standards & procedures followed in the company and schedule for resolving the complaint/problem if any
- **KU3.** reporting structure of the company
- **KU4.** location of specialized tools and the equipment
- **KU5.** location and procedure for trash storage and disposal
- **KU6.** maintenance schedule of the equipment
- **KU7.** types of motor and its uses
- **KU8.** basic physics principles and its applications
- KU9. basic of weight balancing
- **KU10.** the fundamentals of electrical systems, including the control panel
- KU11. common defects and general causes of breakdown
- **KU12.** spill kit procedures

Generic Skills (GS)

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

- **GS1.** record information/observations on activities/incidents in accordance with the established standards
- **GS2.** read and understand basic signs, symbols, graphs, charts, and decals on equipment and at the job site
- **GS3.** read and comprehend the essential elements of the equipment operation and maintenance manuals
- **GS4.** in interacting with coworkers and supervisor, utilise suitable technical terms/phrases
- **GS5.** efficiently explain/instruct other team members in a clear and concise way
- **GS6.** pay close attention to and comprehend the questions/comments offered by other team members
- **GS7.** determine when to escalate the problem and seek assistance if it is out of scope
- **GS8.** prioritise and plan equipment repair to suit operating demands
- **GS9.** plan and organise the work schedule in collaboration with the rest of the team and the supervisor
- **GS10.** execute the duties efficiently within the time limit given and within the quality standards set; with minimum supervision
- **GS11.** ensure quality service is delivered as committed to achieve high levels of customer satisfaction
- **GS12.** analyse potential solutions and take necessary corrective steps and activities
- **GS13.** utilise common sense and reasoning abilities to determine the source of delays and execution issues
- **GS14.** apply knowledge and judgement gained via experience and awareness to efficiently carry out activities









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Routine maintenance	5	6	-	-
PC1. assist in the replenishment of coolants, lubricants and fluids in accordance with the machine's operation manual	0.5	1	-	-
PC2. assist in regularly greasing all greasing pins, trolley pins, hoist and rope and slewing bolts based on machine usage	1	1	-	-
PC3. service lubrication system, electrical service system, hoisting system and stabilising system in accordance with the operation manual	1	1	-	-
PC4. service Jib/boom and mast as directed by the operator/supervisor	1	1	-	-
PC5. check the battery levels and the condition of the terminals and make adjustments as needed	1	1	-	-
PC6. after using the tools, return them to their proper location in accordance with the organization's policies	0.5	1	-	-
Repair and troubleshooting	2	4	-	-
PC7. ensure the main power is turned off from panel completely before carrying out maintenance work	0.5	1	-	-
PC8. while troubleshooting, utilise suitable tools	0.5	1	-	-
PC9. if a fault is found that is outside the scope of the position, notify the operator/supervisor immediately	0.5	1	-	-
PC10. dispose waste as per the guidelines of the site/ organization	0.5	1	-	-
Reporting and documentation	1	2	-	-
PC11. adhere to the reporting procedures established by the employer	0.5	1	-	-









Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. complete all documents in accordance with the required requirements on time	0.5	1	-	-
NOS Total	8	12	-	-









National Occupational Standards (NOS) Parameters

NOS Code	IES/N0169
NOS Name	Assist in regular maintenance of the tower crane
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









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









- **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) andother 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









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Worksite health and safety	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	-	-









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
NSQC Clearance Date	17/11/2022









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









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









- **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









Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	1	1	-	-
PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
Constitutional values - Citizenship	1	1	-	-
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	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.	-	-	-	-
Basic English Skills	2	3	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
Communication Skills	1	1	-	-
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
Diversity & Inclusion	1	1	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
Financial and Legal Literacy	3	4	-	-
PC9. use various financial products and services safely and securely	-	-	-	-









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	-	-	-	-
Essential Digital Skills	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	-	-	-	-
Entrepreneurship	3	5	-	-
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
Customer Service	2	2	-	-
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	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	-	-









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 Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
- 2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
- 3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).









- 4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
- 5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
- 6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

 Minimum Aggregate Passing % at QP Level: 70

(**Please note**: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
IES/N0183.Assist in pre-lifting operations	10	25	-	-	35	20
IES/N0168.Assist in tower crane operations	10	20	-	-	30	30
IES/N0169.Assist in regular maintenance of the tower crane	8	12	-	-	20	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	53	97	-	-	150	100









Acronyms

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









Glossary

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









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