

Qualification Pack



Pipeline Maintenance Technician (Mechanical)

QP Code: HYC/Q6402

Version: 2.0

NSQF Level: 4

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HYC/Q6402: Pipeline Maintenance Technician (Mechanical)

Brief Job Description

The Pipeline Maintenance Technician (Mechanical) is responsible for installation, troubleshooting, repair, preventive maintenance and checking proper functioning of all types of mechanical equipment such as engines, electric motors, pumps, valves, pressure relief devices and related equipment typically associated with oil & gas operations facility and pipelines. The individual is also responsible to maintain records. The person plays a vital role in ensuring that plant and equipment used are in a safe condition and meets safety and technical standards.

Personal Attributes

The individual should be safety-conscious and should have the ability to work for long duration and in shifts, if required.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [HYC/N6402: Prepare for repair and maintenance of the pipeline equipment](#)
2. [HYC/N6403: Carry out repair, maintenance and testing of equipment in oil and gas pipeline](#)
3. [HYC/N9301: Working Effectively in a team](#)
4. [HYC/N9302: Maintain health, safety and security procedures](#)
5. [DGT/VSQ/N0102: Employability Skills \(60 Hours\)](#)

Qualification Pack (QP) Parameters

Sector	Hydrocarbon
Sub-Sector	Midstream
Occupation	Pipeline Maintenance, Pipeline Maintenance
Country	India
NSQF Level	4
Credits	22

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Aligned to NCO/ISCO/ISIC Code	NCO/2015-3115.9900
Minimum Educational Qualification & Experience	10th grade pass (with 2-years relevant experience) OR 12th grade Pass OR 8th grade pass (plus 2-years of NTC plus 1-year NAC) OR 10th grade pass (plus 2-year of National Trade Certificate (NTC) in relevant field) OR Completed 2nd year of the 3-year diploma after 10 (in relevant field and pursuing regular Diploma)
Minimum Level of Education for Training in School	10th Class
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	2.0
Reference code on NQR	2022/HYC/HSSCI/06775
NQR Version	2.0

Remarks:

NA

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HYC/N6402: Prepare for repair and maintenance of the pipeline equipment

Description

This unit is about preparing for repair and maintenance activities of various equipment in oil and gas pipeline system.

Scope

The scope covers the following :

- Check the equipment and machines
- Planning for the repair and maintenance process

Elements and Performance Criteria

Check the equipment and machines

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

- PC1.** obtain the work permit from concerned department/authority
- PC2.** check if oil and gas pipeline equipment are meeting safety and technical standards
- PC3.** monitor health of rotating and static equipment in pipeline system to identify any defect or damage
- PC4.** check the alignment of bearings, couplings, etc. before solo run using analytical and precision tools
- PC5.** perform solo run of the machine/equipment and check for any abnormalities, defect or damage
- PC6.** record data and compare with standard data for rated output to identify the damage/defect
- PC7.** examine the identified defect/damage in equipment/machine

Planning for the repair and maintenance process

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

- PC8.** discuss with site engineer/supervisor with respect to the type of identified damage and for adopting suitable maintenance process
- PC9.** follow the maintenance manual of the machine and equipment requiring maintenance or repair
- PC10.** arrange proper tools, equipment and consumables to perform maintenance and repair activity as per the specification and procedures

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** company's policies on personnel management, duty reporting procedure and associated MIS compliance

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- KU2.** own job role and responsibilities and sources for information pertaining to employment terms, entitlements, job role and responsibilities
- KU3.** reporting structure within organization and relevant people and their responsibilities within the work area
- KU4.** problem escalation procedure and escalation matrix for reporting work and employment related issues
- KU5.** relevant health and safety requirements applicable to the work place
- KU6.** importance of working in a clean and safe environment
- KU7.** documentation and related procedures applicable in the context of employment and work
- KU8.** importance and purpose of documentation in context of employment and work
- KU9.** functions of typical machine and components in oil & gas pipeline facilities
- KU10.** the principle and functions of various machines and equipment in oil and gas pipeline facilities
- KU11.** usage of different software and applications used in organization for repair and maintenance
- KU12.** properties of hydrocarbon component and their processing
- KU13.** safety precautions associated with natural gas pipelines
- KU14.** performance of various pipe materials under a wide variety of conditions.
- KU15.** hazards of the trade and precautionary measures

Generic Skills (GS)

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

- GS1.** follow written instructions
- GS2.** keep abreast by reading about new policies at an organization level
- GS3.** read and interpret information correctly from various job specification documents, manuals, health and safety instructions, memos, etc. applicable to the job in English and/or local language
- GS4.** fill up appropriate technical forms, process charts, activity logs as per organizational format in English and/or local language
- GS5.** communicate with other team members, leaders and operations personnel in writing through appropriate method like letter, memos, email etc.
- GS6.** undertake numerical operations, geometry and calculations
- GS7.** convey and share technical information clearly using appropriate language
- GS8.** check and clarify task-related information
- GS9.** liaise with appropriate authorities using correct protocol
- GS10.** communicate with people in respectful form and manner in line with organizational protocol
- GS11.** make decisions on a suitable course of action or response keeping in view resource utilization while meeting commitments
- GS12.** plan, prioritize and sequence work operations as per job requirements
- GS13.** organize information relevant to work
- GS14.** basic concepts of work productivity including waste reduction, efficient material usage and optimization of time

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- GS15.** deliver consistent and reliable service as per the job requirement
- GS16.** apply problem solving approaches in different situations
- GS17.** identify defects in the material and communicate it at the earliest and suggest improvements (if any) in process/material based on experience
- GS18.** apply problem-solving approaches in different situations
- GS19.** refer anomalies to the line manager
- GS20.** identify any issues affecting the material, equipment or surroundings
- GS21.** escalate issues that cannot be solved as per the troubleshooting/company manual

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Check the equipment and machines</i>	14	22	-	-
PC1. obtain the work permit from concerned department/authority	3	-	-	-
PC2. check if oil and gas pipeline equipment are meeting safety and technical standards	2	4	-	-
PC3. monitor health of rotating and static equipment in pipeline system to identify any defect or damage	2	3	-	-
PC4. check the alignment of bearings, couplings, etc. before solo run using analytical and precision tools	2	4	-	-
PC5. perform solo run of the machine/equipment and check for any abnormalities, defect or damage	1	4	-	-
PC6. record data and compare with standard data for rated output to identify the damage/defect	2	3	-	-
PC7. examine the identified defect/damage in equipment/machine	2	4	-	-
<i>Planning for the repair and maintenance process</i>	6	8	-	-
PC8. discuss with site engineer/supervisor with respect to the type of identified damage and for adopting suitable maintenance process	2	2	-	-
PC9. follow the maintenance manual of the machine and equipment requiring maintenance or repair	3	2	-	-
PC10. arrange proper tools, equipment and consumables to perform maintenance and repair activity as per the specification and procedures	1	4	-	-
NOS Total	20	30	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	HYC/N6402
NOS Name	Prepare for repair and maintenance of the pipeline equipment
Sector	Hydrocarbon
Sub-Sector	Midstream, Downstream
Occupation	Pipeline Maintenance, , Pipeline Maintenance
NSQF Level	4
Credits	6.5
Version	2.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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HYC/N6403: Carry out repair, maintenance and testing of equipment in oil and gas pipeline

Description

This OS is about repair and maintenance activity of mechanical equipment associated with an oil & gas pipeline and operations facility

Scope

The scope covers the following :

- Carry out repair and preventive maintenance
- Testing of equipment & machine after repair

Elements and Performance Criteria

Carry out repair and preventive maintenance

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

- PC1.** isolate the damaged part/equipment from coupling
- PC2.** select the appropriate tools for dismantling the damaged machines/ equipment
- PC3.** dismantle the damaged equipment as per the steps in maintenance manual
- PC4.** check internal parts such as seals, gaskets, oil rings, etc.
- PC5.** remove worn out, defective parts in the machine/mechanical equipment
- PC6.** read engineering drawings specific to machine/equipment
- PC7.** install new and replacement equipment as required
- PC8.** reassemble parts as per the equipment maintenance manual
- PC9.** adjust the repaired machine to its original condition as per the specifications
- PC10.** check reassembled equipment/machine for proper fitting, any abnormal vibration and overheating
- PC11.** perform solo run of the machine/equipment for any abnormalities on repaired/replaced items
- PC12.** monitor activity in and around pipeline and operation facilities and respond when necessary

Testing of equipment & machines after repair

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

- PC13.** perform 5S activities post repair and maintenance
- PC14.** couple the machine/component/equipment with the main line and do trial run
- PC15.** perform pressure/force testing of repaired equipment/machine as per manufacturers manual
- PC16.** prepare the repair and maintenance report and submit it to the supervisor

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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- KU1.** company's policies on: personnel management, duty reporting procedure and associated MIS compliance
- KU2.** own job role and responsibilities and sources for information pertaining to employment terms, entitlements, job role and responsibilities
- KU3.** reporting structure within organization and relevant people and their responsibilities within the work area
- KU4.** problem escalation procedure and escalation matrix for reporting work and employment related issues
- KU5.** relevant health and safety requirements applicable to the work place
- KU6.** importance of working in a clean and safe environment
- KU7.** documentation and related procedures applicable in the context of employment and work
- KU8.** importance and purpose of documentation in context of employment and work
- KU9.** functions of typical machine and components in oil & gas pipeline facilities
- KU10.** functional principle of machine and equipment
- KU11.** various pipeline markers, pipeline clamps and split tee used in repair & maintenance and maintenance of gas & basket filters
- KU12.** pig-launcher & pig-receiver equipment and change of flow-meters
- KU13.** usage of tri-pod and chain pulley blocks in 'lifting tools & tackles' and various types of valves used in gas stations
- KU14.** function of flange bonding/earth clamps, replacement of spiral wound gaskets with proper use of non-sparking tools.
- KU15.** basic properties of hydrocarbon component and their processing
- KU16.** safety precautions associated with natural gas pipelines
- KU17.** performance of various pipe materials under a wide variety of conditions.
- KU18.** hazards of the trade and precautionary measures
- KU19.** process flow charts and machine history cards.
- KU20.** how to prepare and maintain the record of repair and maintenance activities
- KU21.** 5S system

Generic Skills (GS)

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

- GS1.** follow written instructions
- GS2.** keep abreast by reading about new policies at an organization level
- GS3.** read and interpret information correctly from various job specification documents, manuals, health and safety instructions, memos, etc. applicable to the job in English and/or local language
- GS4.** fill up appropriate technical forms, process charts, activity logs as per organizational format in English and/or local language
- GS5.** communicate with other team members, leaders and operations personnel in writing through appropriate method like letter, memos, email etc.
- GS6.** undertake numerical operations, geometry and calculations

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- GS7.** convey and share technical information clearly using appropriate language
- GS8.** check and clarify task-related information
- GS9.** liaise with appropriate authorities using correct protocol
- GS10.** make decisions on a suitable course of action or response keeping in view resource utilization while meeting commitments
- GS11.** plan, prioritize and sequence work operations as per job requirements
- GS12.** organize information relevant to work
- GS13.** basic concepts of work productivity including waste reduction, efficient material usage and optimization of time
- GS14.** deliver consistent and reliable service as per the job requirement
- GS15.** apply problem solving approaches in different situations
- GS16.** identify defects in the material and communicate it at the earliest and suggest improvements (if any) in process/material based on experience
- GS17.** apply problem-solving approaches in different situations
- GS18.** refer anomalies to the line manager
- GS19.** identify any issues affecting the material, equipment or surroundings
- GS20.** escalate issues that cannot be solved as per the troubleshooting/company manual

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out repair and preventive maintenance</i>	23	53	-	-
PC1. isolate the damaged part/equipment from coupling	2	4	-	-
PC2. select the appropriate tools for dismantling the damaged machines/ equipment	2	5	-	-
PC3. dismantle the damaged equipment as per the steps in maintenance manual	2	4	-	-
PC4. check internal parts such as seals, gaskets, oil rings, etc.	2	4	-	-
PC5. remove worn out, defective parts in the machine/mechanical equipment	-	6	-	-
PC6. read engineering drawings specific to machine/equipment	2	5	-	-
PC7. install new and replacement equipment as required	2	4	-	-
PC8. reassemble parts as per the equipment maintenance manual	2	5	-	-
PC9. adjust the repaired machine to its original condition as per the specifications	3	4	-	-
PC10. check reassembled equipment/machine for proper fitting, any abnormal vibration and overheating	2	4	-	-
PC11. perform solo run of the machine/equipment for any abnormalities on repaired/replaced items	2	4	-	-
PC12. monitor activity in and around pipeline and operation facilities and respond when necessary	2	4	-	-
<i>Testing of equipment & machines after repair</i>	7	17	-	-
PC13. perform 5S activities post repair and maintenance	2	4	-	-
PC14. couple the machine/component/equipment with the main line and do trial run	2	4	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC15. perform pressure/force testing of repaired equipment/machine as per manufacturers manual	1	5	-	-
PC16. prepare the repair and maintenance report and submit it to the supervisor	2	4	-	-
NOS Total	30	70	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	HYC/N6403
NOS Name	Carry out repair, maintenance and testing of equipment in oil and gas pipeline
Sector	Hydrocarbon
Sub-Sector	Midstream, Downstream
Occupation	Pipeline Maintenance, , Pipeline Maintenance
NSQF Level	4
Credits	9.5
Version	2.0
Last Reviewed Date	NA
Next Review Date	17/11/2025
NSQC Clearance Date	17/11/2022

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HYC/N9301: Working Effectively in a team

Description

This unit is about working effectively within a team.

Scope

The scope covers the following :

- Effective team work

Elements and Performance Criteria

Effective team work

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

- PC1.** maintain clear communication with colleagues
- PC2.** pass on information to colleagues in line with organisational requirements
- PC3.** provide support to the team members
- PC4.** respect the colleagues
- PC5.** fulfil commitments made to colleagues
- PC6.** inform team members timely, if timelines can't be met
- PC7.** take the necessary initiatives to resolve the issues while working in team
- PC8.** adopt gender neutral behaviour while interacting with colleagues
- PC9.** offer assistance to a person with disability (PWD), only if required

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the organization policies and procedures related to team performance
- KU2.** the importance of effective communication and establishing good working relationships with colleagues
- KU3.** the importance of creating an environment of trust and mutual respect
- KU4.** the implications of own work on the work and schedule of others
- KU5.** the standard practices in organisation w.r.t communication at various levels
- KU6.** the personal responsibility for completing the task in time
- KU7.** importance of gender equality
- KU8.** importance of showing empathy while interacting with a PwD

Generic Skills (GS)

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

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- GS1.** communicate effectively in writing
- GS2.** read instructions, guidelines/procedures
- GS3.** work in a disciplined manner for meeting commitments and deadline
- GS4.** how to plan and prioritise the work
- GS5.** the importance of consistent and reliable services
- GS6.** apply problem solving approaches in different situations
- GS7.** apply balanced judgments to different situations

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Effective team work</i>	20	30	-	-
PC1. maintain clear communication with colleagues	2	3	-	-
PC2. pass on information to colleagues in line with organisational requirements	2	3	-	-
PC3. provide support to the team members	2	4	-	-
PC4. respect the colleagues	3	4	-	-
PC5. fulfil commitments made to colleagues	2	3	-	-
PC6. inform team members timely, if timelines can't be met	2	4	-	-
PC7. take the necessary initiatives to resolve the issues while working in team	3	4	-	-
PC8. adopt gender neutral behaviour while interacting with colleagues	2	2	-	-
PC9. offer assistance to a person with disability (PWD), only if required	2	3	-	-
NOS Total	20	30	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	HYC/N9301
NOS Name	Working Effectively in a team
Sector	Hydrocarbon
Sub-Sector	Generic
Occupation	Generic, Generic
NSQF Level	4
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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HYC/N9302: Maintain health, safety and security procedures

Description

This unit is about maintaining health, safety and security procedure at workplace. It covers responsibilities towards self, others, assets and the environment.

Scope

The scope covers the following :

- Follow health and safety measures
- Follow safety procedures during emergency

Elements and Performance Criteria

Follow health and safety measures

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

- PC1.** use protective clothing/equipment such as face mask, hand gloves, goggle etc for specific tasks and work conditions
- PC2.** identify the people responsible for maintaining health and safety in the workplace
- PC3.** identify possible causes of risk or accident in the workplace
- PC4.** follow safe working practices while dealing with hazards to ensure the safety of self and others
- PC5.** lift heavy objects safely using correct procedures
- PC6.** follow safety signages
- PC7.** maintain hands hygiene by washing hand frequently and thoroughly with soap and water or alcohol-based hand rub
- PC8.** inform the concerned person of any illness related to self and others
- PC9.** maintain workplace hygiene by disinfecting the equipment and tools regularly

Follow safety procedures during emergency

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

- PC10.** respond promptly and appropriately to an accident or in an emergency situation
- PC11.** use appropriate fire extinguishers for different types of fires correctly
- PC12.** follow appropriate rescue techniques during fire hazard
- PC13.** follow good housekeeping practice in order to prevent fire hazards
- PC14.** inform fire safety department about any near-miss incidents in the work place
- PC15.** provide appropriate first aid to victims in an emergency situation
- PC16.** follow the applicable regulations and codes as per safety standard
- PC17.** prepare written accident/incident report and share with the concerned officer/department

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

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- KU1.** company's policies on personnel management and duty reporting procedure
- KU2.** reporting structure within organization
- KU3.** health and safety hazards commonly affecting the work environment and related precautions
- KU4.** importance of maintaining personal hygiene using PPE kit, sanitizer and soap
- KU5.** importance of maintaining workplace hygiene
- KU6.** preventative and remedial actions to be taken in the case of exposure to toxic materials
- KU7.** importance of using protective clothing/equipment while working
- KU8.** various causes of fire
- KU9.** techniques of using different types of fire extinguishers
- KU10.** different materials used for extinguishing fire
- KU11.** various types of safety signs and their significance

Generic Skills (GS)

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

- GS1.** communicate effectively by writing
- GS2.** read instructions, guidelines/procedures and reports
- GS3.** identify and report potential sources of danger
- GS4.** how to plan the work to meet the deadline
- GS5.** the importance of on time services
- GS6.** apply problem solving approaches in different situations
- GS7.** apply balanced judgments in different situations

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Follow health and safety measures</i>	9	15	-	-
PC1. use protective clothing/equipment such as face mask, hand gloves, goggle etc for specific tasks and work conditions	1	2	-	-
PC2. identify the people responsible for maintaining health and safety in the workplace	1	-	-	-
PC3. identify possible causes of risk or accident in the workplace	1	2	-	-
PC4. follow safe working practices while dealing with hazards to ensure the safety of self and others	1	2	-	-
PC5. lift heavy objects safely using correct procedures	1	2	-	-
PC6. follow safety signages	1	2	-	-
PC7. maintain hands hygiene by washing hand frequently and thoroughly with soap and water or alcohol-based hand rub	1	2	-	-
PC8. inform the concerned person of any illness related to self and others	1	1	-	-
PC9. maintain workplace hygiene by disinfecting the equipment and tools regularly	1	2	-	-
<i>Follow safety procedures during emergency</i>	11	15	-	-
PC10. respond promptly and appropriately to an accident or in an emergency situation	1	2	-	-
PC11. use appropriate fire extinguishers for different types of fires correctly	2	2	-	-
PC12. follow appropriate rescue techniques during fire hazard	1	2	-	-
PC13. follow good housekeeping practice in order to prevent fire hazards	1	1	-	-

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. inform fire safety department about any near-miss incidents in the work place	2	2	-	-
PC15. provide appropriate first aid to victims in an emergency situation	1	2	-	-
PC16. follow the applicable regulations and codes as per safety standard	1	2	-	-
PC17. prepare written accident/incident report and share with the concerned officer/department	2	2	-	-
NOS Total	20	30	-	-

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National Occupational Standards (NOS) Parameters

NOS Code	HYC/N9302
NOS Name	Maintain health, safety and security procedures
Sector	Hydrocarbon
Sub-Sector	Generic
Occupation	Generic, Generic
NSQF Level	4
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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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:

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- 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	-	-

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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	31/03/2025
NSQC Clearance Date	31/03/2022

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) will be assigned marks proportional to its importance in NOS. SSC will also lay down the proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on the 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 the theory part for each candidate at each examination/training centre (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training centre based on these criteria.
6. To pass the Qualification Pack assessment, every trainee should score a minimum of 70% of % aggregate marks to successfully clear the assessment.

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7. 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
HYC/N6402.Prepare for repair and maintenance of the pipeline equipment	20	30	0	0	50	20
HYC/N6403.Carry out repair, maintenance and testing of equipment in oil and gas pipeline	30	70	0	0	100	30
HYC/N9301.Working Effectively in a team	20	30	-	-	50	15
HYC/N9302.Maintain health, safety and security procedures	20	30	-	-	50	15
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	20
Total	110	190	-	-	300	100

Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
NSDA	National Skill Development Agency
NSDC	National Skill Development Corporation
SSC	Sector Skill Council
HYC	Hydrocarbon
NOS	National Occupational Standard(s)
OS	Occupational Standard(s)
NSQF	National Skills Qualifications Framework
NSQC	National Skills Qualifications Committee
NCO	National Classification of Occupation
ISCO	International Standard Classification of Occupations
SOP	Standard Operating Procedure
QP	Qualification Pack
PC	Performance Criteria
GS	Generic Skills
KU	Knowledge and Understanding
ITI	Industrial Training Institute
NA	Not Applicable
PPE	Personal Protective Equipment

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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.
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.
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