

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR HYDROCARBON SECTOR

### What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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## Qualifications Pack- Assistant Technician-Production (Oil & Gas)

**SECTOR:** HYDROCARBON INDUSTRY

**SUB-SECTOR:** Upstream

**OCCUPATION:** Production

**REFERENCE ID:** HYC/Q 0102

**ALIGNED TO:** NCO-2015/8131.3100

**Brief Job Description:** The Technician-Production (Oil & Gas) shall be primarily work as a part of field team at production installation, maintenance services, artificial lift team etc. He is to carry out operations and process maintenance of Production Plants, installation like Group Gathering Station (GGS) and Gas Collecting Station (GCS) and their wells sites and SRP. He will do field checking of all levels, pressure, temperature of heater treater, heat exchangers, water bath heaters, Oil-Gas separator, burners storage tank changeover, oil and effluent pumping stations, Gas and air compressor, Chemicals handling, cleaning of filters and strainers. He shall maintain proper records to produce timely reports. He shall follow all company's standard procedures and protocols and cooperate with the technical team and share information across the organization

**Personal Attributes: Personal Attributes:** This job requires the individual to have good problem solving Skills, knowledge of Hydrocarbon Sector, Production process and systems would be an added advantage. Additional skills including communication skills strong customer service, strong problem solving skills ; should be self motivated; should be able to apply practical judgement to successfully perform the assigned responsibilities and a team player with ability to work with team and under pressure.

Qualification Pack for Assistant Technician-Production (Oil & Gas)

Job Details

Qualifications Pack Code	HYC/Q 0102		
Job Role	Assistant Technician- Production (Oil & Gas)		
Credits(NSQF)	TBD	Version number	1.0
Sector	Hydrocarbon	Drafted on	31/03/2017
Sub-sector	Production	Last reviewed on	31/03/2017
Occupation	Poduction	Next review date	31/03/2019
NSQC Clearance on*	09/10/2017		

Job Role	Assistant Technician- Production (Oil & Gas)
Role Description	This role is vital to the safe and effective delivery of production in the Oil and Gas Industry. This role can be based at an onshore based oil and gas processing facility or an offshore production facility.
NVQF level	4
Minimum Educational Qualifications	Class XII or Class X+2 year of ITI course
Maximum Educational Qualifications	Diploma or equivalent
Training	Knowledge of basic machine tools handling would be an added advantage
Experienc	0-2 years
Minimum Job Entry Age	18 Years
Applicable National Occupational Standards (NOS)	<p><b>Compulsory:</b></p> <ol style="list-style-type: none"> <li><a href="#">HYC/N 0104 Perform Production activities (On Shore and Off Shore)</a></li> <li><a href="#">HYC/N 0102 Occupational health and safety (OHAS)</a></li> <li><a href="#">HYC/N 0103 Working effectively with colleagues and supervisor</a></li> </ol>
Performance Criteria	As described in the relevant OS units

*Qualification Pack for Assistant Technician-Production (Oil & Gas)*

**Definitions**

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses 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.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
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 they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
NOS	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification 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.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
Organizational Context	Organizational Context includes the way the organization 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.

*Qualification Pack for Assistant Technician-Production (Oil & Gas)*

Acronyms

Keywords /Terms	Description
SHE	Safety Health & Environment
OHS	Operational Health & Safety
Core Skills or Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working 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.

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# National Occupational Standard



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## Overview :

The Unit is about the various activities in Production and Maintenance, On shore production, off shore production of Oil and Natural Gas while following the safety standards

HYC/N 0104

Perform Production activities (On Shore and Off Shore)

National Occupational Standard

Unit Code	HYC/N 0104
Unit Title (Task)	Perform Production activities (On Shore and Off Shore)
Description	This unit is about Oil & Gas Production (On Shore and Off Shore)
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Oil &amp; Gas Production Processes</li> <li>Production Techniques</li> <li>Maintenance Techniques</li> <li>Maintenance Hand Tools</li> <li>Health and Safety in Production operations and Maintenance jobs</li> <li>Oil &amp; Gas Production Processes (onsite training)</li> </ul>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
<b>Oil &amp; Gas Production Processes</b>	<p>To be competent, the user/individual on the job must be able to</p> <p>PC1. Understand Production Process in Oil &amp; Gas field operation: Oil and Gas Processing Operations (Well surveillance, monitoring &amp; maintenance, wireline operation), Oil &amp; Gas Production Processes ( onsite training), (Compressor), (Static as well as mobile Boilers), Multi-Phase Separation in separators &amp; Emulsion Treaters)</p> <p>PC2. Understand Oil and Gas Processing Operations (Pigging, Hottapping, new flow line laying, replacement of existing flow lines, clearing of flow lines plugging), (Gas Dehydration), (Produced Water), (Water Injection)</p> <p>PC3. Operation and maintenance of various Well stimulation &amp; Servicing Units, wireline units and new well completion</p> <p>PC4. Operation and maintenance of work-over well completion</p> <p>PC5. Carry out operation of crude oil upliftment through bousers, monitoring and maintenance of field Indirect Heaters ,emulsion Treaters and Crude Oil Storage Tanks, oil and Gas Processing Operations (Gas Treatment)</p>
<b>Health and Safety in Production and Maintenance</b>	<p>PC6. Describe safe working practices for working in a maintenance workshop</p> <p>PC7. Describe the operation of safety documentation and procedures</p> <p>PC8. Identify relevant emergency requirements for a maintenance workshop</p> <p>PC9. Identify potential hazards in a workshop environment</p> <p>PC10. Describe the associated risks and implications for people, equipment and the environment</p> <p>PC11. Describe measures that could be taken to minimise the risks</p> <p>PC12. Communicate and work effectively as part of a team for maintenance tasks</p> <p>PC13. Take part in a tool box talk</p>



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**Perform Production activities (On Shore and Off Shore)**

	<p>PC14. Use correct manual handling techniques for maintenance tasks</p> <p>PC15. Select and use the correct personal protection equipment for maintenance tasks</p> <p>PC16. Maintain the workspace in a clean and tidy manner and dispose of waste</p>
<b>Basic Production Techniques</b>	<p>PC17. Identify tools, equipment and material that would be required for a range of basic routine for Off Shore Oil and Gas Production tasks</p> <p>PC18. Prepare the tools, equipment and materials for given Production tasks</p> <p>PC19. Prepare the work area for given Production tasks</p> <p>PC20. Identify tools, equipment and material that would be required for a range of basic routine for on Shore Oil and Gas Production tasks</p> <p>PC21. Prepare the tools, equipment and materials for given Production tasks</p> <p>PC22. Prepare the work area for given Production tasks</p> <p>PC23. Carry out Basic routines for Oil and Gas Production Process</p> <p>PC24. ensure appropriate cleaning routines using the correct cleaning agents</p> <p>PC25. Carry out routine lubrication, using the correct lubricant for the application</p> <p>PC26. ensure oil levels and add oil as required</p> <p>PC27. Tighten fastenings using correct Tools and equipment</p> <p>PC28. Check tensions and adjust as required</p> <p>PC29. Carry out basic visual inspection for common faults</p> <p>PC30. record observed for any faults</p> <p>PC31. Clear work areas following Pre and Post Production tasks</p> <p>PC32. Carry out Basic Production Reporting Data Entry</p> <p>PC33. Interpretation of Production Data</p>
<b>Basic Maintenance Techniques and Practices</b>	<p>PC34. Prepare for basic routine maintenance tasks</p> <p>PC35. Describe basic routine maintenance techniques</p> <p>PC36. Carry out basic routine maintenance tasks</p> <p>PC37. Carry out basic inspections</p> <p>PC38. Identify the use of basic maintenance hand tools</p> <p>PC39. Demonstrate the use of basic hand tools for maintenance tasks and the production of an artifact</p> <p>PC40. Demonstrate the care of basic maintenance hand tools</p>
<b>Maintenance</b>	<p>PC41. Describe the key features of prime movers</p> <p>PC42. Outline typical maintenance requirements of prime movers</p> <p>PC43. Know-how of the key features of transmission systems and components</p> <p>PC44. Outline typical maintenance requirements of transmission systems and components</p> <p>PC45. Describe the key features of distribution systems</p> <p>PC46. Knowledge of the key features of separation system</p> <p>PC47. understanding of the key features of tank systems</p> <p>PC48. Know-how of the key features of oil and gas transport systems</p>

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	<p>PC49. identify the key features of oil and gas well</p> <p>PC50. Understanding of the key features of SRP systems</p> <p>PC51. Describe the key features of gas lift systems</p> <p>PC52. knowledge the key features of rotating equipment and tools</p> <p>PC53. Outline typical maintenance requirements of rotating equipment and tools</p> <p>PC54. Outline typical maintenance requirements of measurement systems and equipment</p> <p>PC55. Outline typical maintenance requirements of control systems and equipment</p> <p>PC56. Outline typical maintenance requirements of protection and detection systems</p>
<b>Oil &amp; Gas Production Processes ( onsite training)</b>	<p>To be competent, the user/individual on the job must be able to</p> <p>PC57. Understand Production operation and processes in Oil &amp; Gas</p> <p>PC58. Indentify oil &amp; gas euipments</p> <p>PC59. Understand the functionality of each equipment</p> <p>PC60. Understand standard operating procedures</p> <p>PC61. Understand preventive maintenance requirements</p> <p>PC62. Understand the record keeping and reporting instructions</p> <p>PC63. Understand the HSE requirement</p> <p>PC64. Understand the emergency response roles and responsibility</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Organisational SOP on Production Process</p> <p>KA2. Risk and impact of not following defined procedures/work instructions</p> <p>KA3. Escalation matrix for reporting identified incidents, troubles and/ or emergencies e.g. system failures ,fire and power failures</p> <p>KA4. records to be maintained and implications of non-maintenance of the same</p> <p>KA5. SHE and OHS guidelines and regulations as per company's norms</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Basic Oil &amp; Gas Production Process and Operations</p> <p>KB2. Basic Maintenance Hand Tools</p> <p>KB3. Basic Measuring and Marking-out Instruments</p> <p>KB4. Basic Engineering Communications</p> <p>KB5. Basic numerical Skills</p> <p>KB6. Physical Science and Basic Properties of Materials</p>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<p><b>Basic Reading &amp; Writing Skills</b></p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Fill up appropriate technical forms, activity logs in required format of the company</p> <p>SA2. Maintain proper records as per given format</p>



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**Perform Production activities (On Shore and Off Shore)**

	SA3. Read and understand manuals, work orders, health and safety instructions, memos, reports etc.
	<b>Communication Skills</b>
	The user/ individual on the job needs to know and understand how to: SA4. Corteous to the customers SA5. Liaisioning and coordination skills SA6. Communicate with supervisor and peers SA7. Communicate in the local language (preferable)
<b>A. Professional Skills</b>	<b>Working with others</b>
	The user/individual on the job needs to know and understand how to: SB1. Remain congenial while discussing and debating issues with co-workers SB2. Follow appropriate protocols for communication based on situation, hierarchy, organizational culture and practice SB3. Ask for, provide and receive required assistance where possible to ensure achievement of work related objectives SB4. Thank coworkers for any assistance received SB5. SB11. Offer appropriate respect based on mutuality and respect for fellow workmanship and authority
	<b>Plan and Organize</b>
	The user/individual on the job needs to know and understand: SB1. Plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity
	<b>Customer Centricity</b>
	The user/individual on the job needs to know and understand how to: SB8. NA
	<b>Problem Solving</b>
	The user/individual on the job needs to know and understand how to: SB7. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s) SB8. Identify immediate or temporary solutions to resolve delays SB9. Identify sources of support that can be availed of for problem solving for various kind of problems SB10. Seek appropriate assistance from other sources to resolve problems SB11. Report problems that you cannot resolve to appropriate authority
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB6. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to:

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	<p>SB7. apply problem-solving approaches in different situations</p> <p>SB8. refer anomalies to the line manager SB18. Identify any issues affecting the material, equipment or surroundings</p> <p>SB9. Escalate issues that cannot be solved as per the troubleshooting/company manual</p>
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HYC/N 0104

Perform Production activities (On Shore and Off Shore)

## NOS Version Control

NOS Code	RSC / N 0104		
Credits(NSQF)	TBD	Version number	1.0
Industry	Hydrocarbon	Drafted on	02/03/2017
Industry Sub-sector	Upstream	Last reviewed on	02/03/2017
Occupation	Production	Next review date	02/03/2019



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# National Occupational Standard



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## Overview

This OS unit is about knowledge and practices relating to health, safety that candidates need to use in the workplace. It covers responsibilities towards self, others, assets and the environment. It includes understanding of risks and hazards in the workplace, along with common techniques to minimize risk, deal with accidents, emergencies, etc.

It covers knowledge of fire safety, common first aid applications, safe practices and emergency procedures.

## Occupational health and safety (OHAS)

Unit Code	HYC/N 0102
Unit Title (Task)	Occupational health and safety (OHAS)
Description	This unit is about Health and Safety in Production and Maintenance
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Occupational health and safety (OHAS)</li> <li>Fire safety and emergency procedures</li> <li>Emergencies, rescue and first-aid procedures</li> </ul>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
<b>Health and safety</b>	<p>To be competent, the user/individual on the job must be able to</p> <p>PC1. Use protective clothing/equipment for specific tasks like cutting, welding, repairing in pipeline jobs, well operations, maintenance inside the installation and work conditions during day to day work and during emergency</p> <p>PC2. State the name and location of people responsible for health and Safety for the workplace and escalation matrix</p> <p>PC3. Identify job-site hazardous work and state possible causes of risk or possible accidents in the workplace</p> <p>PC4. Carry out safe working practices while dealing with hazards to ensure the safety of self and others state methods of accident prevention in the work environment of the job role</p> <p>PC5. State location of general health and safety equipment in the workplace</p> <p>PC6. Inspect for faults, set up and safely use steps and ladders in general use</p> <p>PC7. Work safely in and around trenches, elevated places and confined areas</p> <p>PC8. Identify common risks and safety SOP in Oil &amp; Gas production area</p>
<b>Fire safety</b>	<p>PC9. Use the various appropriate fire extinguishers on different types of fires correctly</p> <p>PC10. Identify and follow pro active and reactive fire fighting SOP in Oil &amp; Gas production facilities</p> <p>PC11. Perform Fire Evacuation Steps</p> <p>PC12. Prepare incident Reports</p>
<b>Emergencies, rescue and first-aid procedures</b>	<p>PC13. Availability of First Aid box &amp; accessories</p> <p>PC14. Demonstrate how to free a person from electrocution</p> <p>PC15. Administer appropriate first aid to victims where required eg. in case of bleeding, burns, choking, electric shock, poisoning etc.</p> <p>PC16. Administer appropriate first aid in chemical hazard</p>

**HYC/N 0102**

**Occupational health and safety (OHAS)**

	<p>PC17. Perform and organize loss minimization or rescue activity during an accident in real or simulated environments</p> <p>PC18. Follow SOP in Oil &amp; Gas Drilling Facilities</p> <p>PC19. Use/Proper utilization of breathing apparatus</p> <p>PC20. Ensure emergency preparation and response</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Names (and job titles if applicable), and where to find, all the people responsible for health and safety in a workplace</p> <p>KA2. Names and location of documents that refer to health and safety in the workplace.</p> <p>KA3. Risk and impact of not following defined procedures/work instructions</p> <p>KA4. Escalation matrix for reporting identified incidents, troubles and/or emergencies e.g. system failures, fire and power failures</p> <p>KA5. Records to be maintained and implications of non-maintenance of the same</p> <p>KA6. SHE and OHS guidelines and regulations as per company's norms</p> <p>KA7. Understanding of 5S and Housekeeping</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Occupational health and safety</p> <p>KB2. Hazards and its effects and risk assessment</p> <p>KB3. Safe Working Practices</p> <p>KB4. Use of different types of Personal Protective Equipments (PPE)</p> <p>KB5. Various types of Fire Fighting Equipments &amp; its uses in different conditions</p> <p>KB6. Standard Operating Procedures in Oil and Gas Safety w.r.t. occupational health &amp; safety</p> <p>KB7. Risk Management and reporting</p>
<b>Skills (S)</b>	
<b>B. Core Skills/ Generic Skills</b>	<b>Basic Reading &amp; Writing Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Fill up appropriate technical forms, activity logs in required format of the company</p> <p>SA2. Maintain proper records as per given format</p> <p>SA3. Read and understand manuals, work orders, health and safety instructions, memos, reports etc.</p>
	<b>Communication Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA4. Courteous to the customers</p> <p>SA5. Liaisoning and coordination skills</p>



**HYC/N 0102**

**Occupational health and safety (OHAS)**

	<p>SA6. Communicate with supervisor and peers</p> <p>SA7. Communicate in the local language (preferable)</p>
<b>C. Professional Skills</b>	<b>Decision Making</b>
	The user/individual on the job needs to know and understand how to:
	SB1. make decisions on a suitable course of action or response
	<b>Plan and Organize</b>
	The user/individual on the job needs to know and understand:
	SB2. Plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity
	<b>Customer Centricity</b>
	The user/individual on the job needs to know and understand how to:
	SB8. NA
	<b>Problem Solving</b>
	The user/individual on the job needs to know and understand how to:
	SB7. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s)
	SB8. Identify immediate or temporary solutions to resolve delays
	SB9. Identify sources of support that can be availed of for problem solving for various kind of problems
	SB10. Seek appropriate assistance from other sources to resolve problems
	SB11. Report problems that you cannot resolve to appropriate authority
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB9. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to:
	SB10. apply problem-solving approaches in different situations
	SB11. refer anomalies to the line manager SB18. Identify any issues affecting the material, equipment or surroundings
	SB12. Escalate issues that cannot be solved as per the troubleshooting/company manual

## **NOS Version Control**

<b>NOS Code</b>	<b>RSC / N 0102</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Hydrocarbon</b>	<b>Drafted on</b>	<b>02/03/2017</b>
<b>Industry Sub-sector</b>	<b>Upstream</b>	<b>Last reviewed on</b>	<b>02/03/2017</b>
<b>Occupation</b>	<b>Production</b>	<b>Next review date</b>	<b>02/03/2019</b>



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# National Occupational Standard



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## Overview

**The Unit is about Work effectively with colleagues and supervisor**

**Working effectively with colleagues and supervisor**

<b>Unit Code</b>	<b>HYC/N 0103</b>
<b>Unit Title (Task)</b>	<b>Working effectively with colleagues and supervisor</b>
<b>Description</b>	This unit covers basic etiquette and competencies that a candidate is required to possess and demonstrate in their behavior and interactions with others at the workplace.
<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>Working with Team</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Work effectively with colleagues and supervisor</b>	<p>PC1. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required</p> <p>PC2. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt</p> <p>PC3. Give information to others clearly, at a pace and in a manner that helps them to understand</p> <p>PC4. Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible</p> <p>PC5. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks</p> <p>PC6. Display appropriate communication etiquette while working</p> <p>PC7. Display active listening skills while interacting with others at work</p> <p>PC8. Use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism</p> <p>PC9. Demonstrate responsible and disciplined behaviors at the workplace</p> <p>PC10. Demonstrate Time Management Skills</p> <p>PC11. Understands Expectation Management</p> <p>PC12. Demonstrate Commitment to work, adhering to SOPs, Honesty etc.</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions</p> <p>KA2. Reporting structure, inter-dependent functions, lines and procedures in the work area</p> <p>KA3. Risk and impact of not following defined procedures/work instructions</p> <p>KA4. Escalation matrix for reporting identified incidents, troubles and/ or emergencies e.g. system failures, fire and power failures</p>

**Working effectively with colleagues and supervisor**

	<p>KA5. Records to be maintained and implications of non-maintenance of the same</p> <p>KA6. SHE and OHS guidelines and regulations as per company's norms</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. The user/individual on the job needs to know and understand:</p> <p>KB2. Various categories of people that one is required to communicate and co-ordinate with in the organization</p> <p>KB3. Importance of effective communication in the workplace</p> <p>KB4. Importance of teamwork in organizational and individual success</p> <p>KB5. Various components of effective communication</p> <p>KB6. Key elements of active listening</p> <p>KB7. Value and importance of active listening and assertive communication</p> <p>KB8. Barriers to effective communication</p> <p>KB9. Importance of tone and pitch in effective communication</p> <p>KB10. Importance of avoiding casual expletives and unpleasant terms while communicating professional circles</p> <p>KB11. How poor communication practices can disturb people, environment and cause problems for the employee, the employer and the customer</p> <p>KB12. Importance of ethics for professional success</p> <p>KB13. Importance of discipline for professional success</p> <p>KB14. What constitutes disciplined behavior for a working professional</p>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Basic Reading &amp; Writing Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Filling up appropriate technical forms, activity logs in required format of the company based on the SOP</p> <p>SA2. Maintain proper records as per given format</p> <p>SA3. Read and understand manuals, work orders, health and safety instructions, memos, reports etc.</p>
	<b>Communication Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA4. Corteous to the Peers , Juniors , Superiors and customers</p> <p>SA5. Liaisioning and coordination skills</p>
<b>B. Professional Skills</b>	<b>Decision Making</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. make decisions on a suitable course of action or response</p>
	<b>Plan and Organize</b>
	<p>The user/individual on the job needs to know and understand:</p>

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**Working effectively with colleagues and supervisor**

	SB2. Plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity
	<b>Customer Centricity</b>
	The user/individual on the job needs to know and understand how to: SB3. NA
	<b>Problem Solving</b>
	The user/individual on the job needs to know and understand how to: SB4. Think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s) SB5. Identify immediate or temporary solutions to resolve delays SB6. Identify sources of support that can be availed of for problem solving for various kind of problems SB7. Seek appropriate assistance from other sources to resolve problems SB8. Report problems that you cannot resolve to appropriate authority
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB9. Identify defects in the material and communicate it at the earliest and suggest improvements(if any) in process/material based on experience
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB10. apply problem-solving approaches in different situations SB11. refer anomalies to the line manager SB12. Escalate issues that cannot be solved as per the troubleshooting/company manual



## NOS Version Control

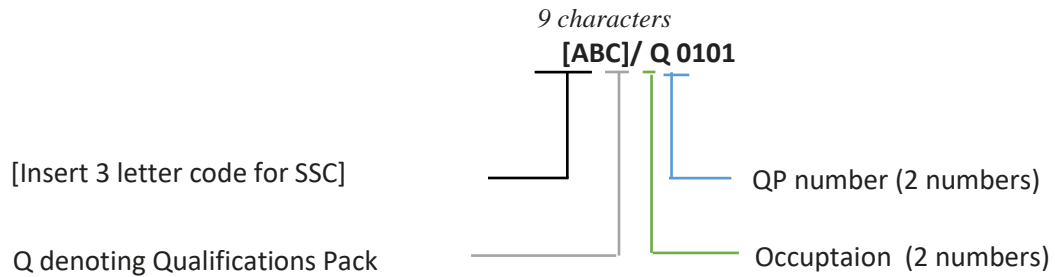
<b>NOS Code</b>	<b>RSC / N 0103</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Hydrocarbon</b>	<b>Drafted on</b>	<b>02/03/2017</b>
<b>Industry Sub-sector</b>	<b>Upstream</b>	<b>Last reviewed on</b>	<b>02/03/2017</b>
<b>Occupation</b>	<b>Production</b>	<b>Next review date</b>	<b>02/03/2019</b>



## Annexure

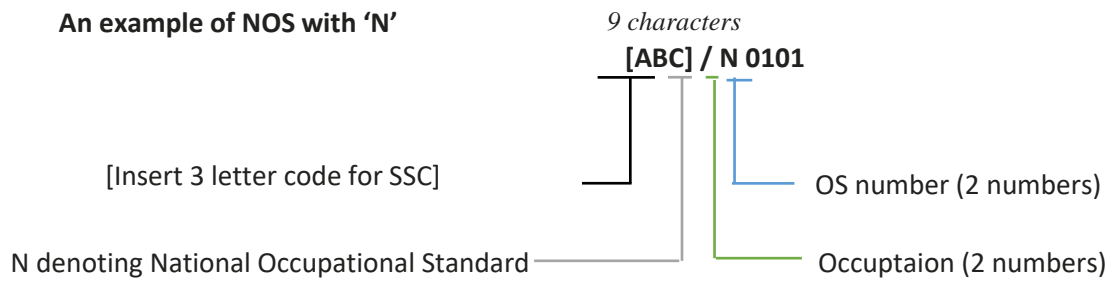
### Nomenclature for QP and NOS

#### Qualifications Pack



#### Occupational Standard

##### An example of NOS with 'N'



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## **CRITERIA FOR ASSESSMENT OF TRAINEES**

**Job Role** Assistant Technician- Production (Oil & Gas)

**Qualification Pack** HYC/Q 0102

**Sector Skill Council** Hydrocarbon Sector Skill Council

### **Guidelines for Assessment**

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 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. 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).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
5. To pass the Qualification Pack , every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
6. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

Compulsory NOS				Marks Allocation	
Total Marks: [100]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
HYC/N0104 Production (On Shore and Off Shore)	PC1. Understand Production Process in Oil & Gas field operation: Oil and Gas Processing Operations (Well surveillance, monitoring & maintenance,wireline operation), Oil & Gas Production Processes ( onsite training), (Compressor), (Static as well as mobile Boilers), Multi-Phase Separation in separators & Emulsion Treaters)	100	2	1	1
	PC2. Understand Oil and Gas Processing Operations (Pigging, Hottapping, new flow line laying, replacement of existing flow lines,clearing of flow lines plugging), (Gas Dehydration), (Produced Water), (Water Injection)		2	1	1
	PC3. Operation and maintenance of various Well stimulation & Servicing Units, wireline units and new well completion		2	0	2

Compulsory NOS				Marks Allocation	
Total Marks: [100]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC4. Operation and maintenance of work-over well completion		1	1	0
	PC5. Carry out operation of crude oil upliftment through bousers, monitoring and maintenance of field Indirect Heaters ,emulsion Treaters and Crude Oil Storage Tanks, oil and Gas Processing Operations (Gas Treatment)		2	0	2
	PC6. Describe safe working practices for working in a maintenance workshop		1	0	1
	PC7. Describe the operation of safety documentation and procedures		1	0	1
	PC8. Identify relevant emergency requirements for a maintenance workshop		1	0	1
	PC9. Identify potential hazards in a workshop environment		1	0	1
	PC10. Describe the associated risks and implications for people, equipment and the environment		1	0	1
	PC11. Describe measures that could be taken to minimise the risks		1	0	1
	PC12. Communicate and work effectively as part of a team for maintenance tasks		1	0	1
	PC13. Take part in a tool box talk		1	0	1
	PC14. Use correct manual handling techniques for maintenance tasks		1	0	1
	PC15. Select and use the correct personal protection equipment for maintenance tasks		1	0	1
	PC16. Maintain the workspace in a clean and tidy manner and dispose of waste		1	0	1
	PC17. Identify tools, equipment and material that would be required for a range of basic routine for Off Shore Oil and Gas Production tasks		1	0	1
	PC18. Prepare the tools, equipment and materials for given Production tasks		1	0	1
	PC19. Prepare the work area for given Production tasks		1	0	1
	PC20. Identify tools, equipment and material that would be required for a range of basic routine for on Shore Oil and Gas Production tasks		1	0	1
	PC21. Prepare the tools, equipment and materials for given Production tasks		1	0	1
	PC22. Prepare the work area for given Production tasks		1	0	1
	PC23. Carry out Basic routines for Oil and Gas Production Process		1	0	1
	PC24. Carry out appropriate cleaning routines using the correct cleaning agents		1	0	1

Compulsory NOS				Marks Allocation	
Total Marks: [100]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC25. Carry out routine lubrication, using the correct lubricant for the application		1	0	1
	PC26. Check oil levels and add oil as required		1	0	1
	PC27. Tighten fastenings using correct tools and equipment		1	0	1
	PC28. Check tensions and adjust as required		1	0	1
	PC29. Carry out basic visual inspection for common faults		1	0	1
	PC30. record observed for any faults		1	0	1
	PC31. Clear work areas following Pre and Post Production tasks		1	0	1
	PC32. Carry out Basic Production Reporting Data Entry		2	1	1
	PC33. Interpretation of Production Data		2	1	1
	PC34. Prepare for basic routine maintenance tasks		2	1	1
	PC35. Describe basic routine maintenance techniques		2	1	1
	PC36. Carry out basic routine maintenance tasks		2	1	1
	PC37. Carry out basic inspections		2	1	1
	PC38. Identify the use of basic maintenance hand tools		2	1	1
	PC39. Demonstrate the use of basic hand tools for maintenance tasks and the production of an artifact		2	1	1
	PC40. Demonstrate the care of basic maintenance hand tools		2	1	1
	PC41. Describe the key features of prime movers		1	0	1
	PC42. Outline typical maintenance requirements of prime movers		2	1	1
	PC43. Describe the key features of transmission systems and components		2	1	1
	PC44. Outline typical maintenance requirements of transmission systems and components		2	1	1
	PC45. Describe the key features of distribution systems		2	1	1
	PC46. knowledge the key features of separation system		2	1	1
	PC47. understanding of the key features of tank systems		2	1	1
	PC48. know-how the key features of oil and gas transport systems		2	1	1
	PC49. identify the key features of oil and gas well		2	1	1
	PC50. understand the key features of SRP systems		2	1	1
	PC51. Describe the key features of gas lift systems		2	1	1
	PC52. knowledge the key features of rotating equipment and tools		2	1	1

Compulsory NOS				Marks Allocation	
Total Marks: [100]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC53. Outline typical maintenance requirements of rotating equipment and tools		2	1	1
	PC54. Outline typical maintenance requirements of measurement systems and equipment		2	1	1
	PC55. Outline typical maintenance requirements of control systems and equipment		2	1	1
	PC56. Outline typical maintenance requirements of protection and detection systems		2	1	1
	PC57. Understand Production operation and processes in Oil & Gas		2	1	1
	PC58. Identify oil & gas equipments		2	1	1
	PC59. Understand the functionality of each equipment		2	1	1
	PC60. Understand standard operating procedures		2	1	1
	PC61. Understand preventive maintenance requirements		2	1	1
	PC62. Understand the record keeping and reporting instructions		2	1	1
	PC63. Understand the HSE requirement		2	1	1
	PC64. Understand the emergency response roles and responsibility		2	1	1
				35	65

Compulsory NOS				Marks Allocation	
Total Marks: [100]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
HYC/N 0102 Occupational health and safety (OHAS)	PC 1 Use protective clothing/equipment for specific tasks like cutting, welding, repairing in pipeline jobs, well operations, maintenance inside the installation and work conditions during day to day work and during emergency.	100	6	3	3
	PC2. State the name and location of people responsible for health and Safety for the workplace and escalation matrix.		5	0	5
	PC 3 Identify job-site hazardous work and state possible causes of risk or possible accidents in the workplace.		6	3	3



Compulsory NOS				Marks Allocation	
Total Marks: [100]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC 4 Carry out safe working practices while dealing with hazards to ensure the safety of self and others state methods of accident prevention in the work environment of the job role.		6	3	3
	PC 5. State location of general health and safety equipment in the workplace.		5	0	5
	PC 6. Inspect for faults		5	3	2
	PC 7 Work safely in and around trenches		5	3	2
	PC8. Identify common risks and safety SOP in Oil & Gas production area		5	1	4
	PC 9. Use the various appropriate fire extinguishers on different types of fires correctly.		5	2	3
	PC 10. Identify and follow pro active and reactive fire fighting SOP in Oil & Gas production facilities		5	3	2
	PC 11. Perform Fire Evacuation Steps		6	3	3
	PC12. Prepare incident Reports		5	3	2
	PC 13. Availability of First Aid box & accessories		5	2	3
	PC 14. Demonstrate how to free a person from electrocution		5	3	2
	PC 15. Administer appropriate first aid to victims where required eg. in case of bleeding, burns, choking, electric shock, poisoning etc.		5	2	3
	PC 16. Administer appropriate first aid in chemical hazard		5	2	3
	PC 17. Perform and organize loss minimization or rescue activity during an accident in real or simulated environments		5	2	3
	PC18. Follow SOP in Oil & Gas production Facilities		5	2	3
	PC 19 Use/Proper utilization of breathing apparatus		3	1	2
	PC 20 Ensure emergency preparation and response		3	1	2
				42	58

Compulsory NOS				Marks Allocation	
Total Marks: [92]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
HYC/N 0103 Working effectively with colleagues and supervisor	PC1. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required	92	8	2	6
	PC2. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt		8	2	6

Compulsory NOS				Marks Allocation	
Total Marks: [92]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC3. Give information to others clearly, at a pace and in a manner that helps them to understand		8	2	6
	PC5. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks		8	2	6
	PC6. Display appropriate communication etiquette while working		8	2	6
	PC7. Display active listening skills while interacting with others at work		8	2	6
	PC8. Use appropriate tone, pitch and language to convey politeness, assertiveness,		8	2	6
	PC9. Demonstrate responsible and disciplined behaviors at the workplace		8	2	6
	PC10. Demonstrate Time Management Skills		10	2	8
	PC11. Understands Expectation Management		8	2	6
	PC12. Demonstrate Commitment to work, adhering to SOPs, Honesty etc.		10	2	8
				22	70