Plumbing Site Engineer

QP Code: PSC/Q0115

Version: 2.0

NSQF Level: 6

Water Management and Plumbing Skill Council || Unit No-606, DLF Prime Tower
Okhla Phase-1 New Delhi-110020

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PSC/Q0115: Plumbing Site Engineer

Brief Job Description

A Plumbing Site Engineer is responsible for overseeing and coordinating plumbing installations and repairs on construction sites. Their main duties include: 1. Reading and interpreting blueprints and plans to determine the scope of the plumbing work required. 2. Coordinating with other trades such as electricians, carpenters, and HVAC technicians to ensure that plumbing systems are installed in a timely and efficient manner. 3. Supervising the work of plumbing contractors and ensuring that they adhere to all safety regulations and quality standards. 4. Ensuring that all plumbing work is completed within budget and on schedule. 5. Liaising with clients and stakeholders to ensure that their needs are met and that their concerns are addressed promptly.

Personal Attributes

The individual must be able to work independently on assignments, be a good listener, possess analytical skills and have an eye for detail. The individual should also be able to confidently communicate with clients, vendors and consultants.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. PSC/N0156: Plan and Initiate a Plumbing Project
2. PSC/N0157: Monitor Work at a Plumbing Worksite
3. PSC/N0136: Apply Health and Safety Practices at the Workplace
4. PSC/N0138: Implement Measures to Work Effectively
5. DGT/VSQ/N0101: Employability Skills (30 Hours)

Qualification Pack (QP) Parameters

Sector	Plumbing
Sub-Sector	Industrial / Non-Industrial Plumbing
Occupation	Plumbing Systems Installation and Maintenance
Country	India
NSQF Level	6

Credits	21
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 2142.0301
Minimum Educational Qualification & Experience	Pursuing 4th year UG (in case of 4-year UG with honours/ honours with research) (Civil Engineering or Mechanical Engineering) OR Completed 3 year UG degree program after 12th (Civil Engineering or Mechanical Engineering) OR Pursuing PG diploma after 3 year UG degree (Civil Engineering or Mechanical Engineering) OR Previous relevant Qualification of NSQF Level (5 as Plumbing Supervisor) with 3 Years of experience Relevant
Minimum Level of Education for Training in School	Not Applicable
Pre-Requisite License or Training	NA
Minimum Job Entry Age	21 Years
Last Reviewed On	NA
Next Review Date	NA
NSQC Approval Date	
Version	2.0

PSC/N0156: Plan and Initiate a Plumbing Project

Description

This unit is about preparing for plumbing as per required standards and specifications.

Scope

The scope covers the following :

- Identify requirements
- Plan and schedule work activities
- Ensure availability of required resources
- Initiate the project

Elements and Performance Criteria

Identify requirements

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

PC1. identify the objectives and considerations for the work from stakeholders inputs and studying the contract and drawings

PC2. compile relevant information from the client briefing and technical inputs from concerned authorities

PC3. survey the site to identify impact of local conditions on project strategy and design

PC4. prepare design basis report (DBR) for facilitating the project design

PC5. communicate the inputs obtained through site surveys to the designers and management for modifications

PC6. provide technical support to architects, design engineers and experts to strengthen the designs

Plan and schedule work activities

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

PC7. extract relevant information from plumbing project design and specifications

PC8. plan a strategy for completion of plumbing project within the given budgets and constraints

PC9. prepare estimations, costing and budget reports for the project

PC10. schedule various tasks to be performed for the plumbing project

PC11. share plan and schedule with the management team and obtain their approval

Ensure availability of required resources

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

PC12. perform measurements and hydraulic calculations to identify the required equipment and materials for the plumbing project

PC13. estimate manpower requirements based on the work plan

PC14. determine adjustments required in timelines, costs and quantity of materials in line with the proposed design

PC15. identify potential suppliers for sourcing manpower, equipment and material at the work site

PC16. negotiate and agree a price with vendors

PC17. order for tools, equipment and supplies as required for the project

PC18. facilitate contracting for manpower supply as per requirement

PC19. follow up with vendors for material delivery as per standard operating procedure (SOP)

PC20. ensure adequate stock of equipment and supplies in the stockroom

PC21. verify contractors' and suppliers' bills for manpower, equipment and materials

Initiate the project

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

PC22. prepare the site for the project including setting boundaries and signage, clearing waste and hazards, levelling the area, etc.

PC23. organise for necessary facilities at project site such as water, electricity, toolrooms, washrooms, etc.

PC24. prepare site diaries and work allocation sheets for the project undertaken

PC25. prepare detailed work plans for the execution team

PC26. allocate work and provide instructions to the team

PC27. handover all the project documents to the supervisor prior to starting the work

PC28. ensure that quality assurance (QA) / quality control (QC) measures are implemented for various activities/items as per plan

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. standards, policies, and procedures followed in the company relevant to the role

KU2. organization's departments and hierarchy

KU3. individual's role in the workflow

KU4. • workplace hazard reporting and hazard handling procedures
•

KU5. workplace safety requirements

KU6. standards applicable to the piping installation in plumbing

KU7. types and purpose of drawings, blueprints and plans associated with plumbing projects and relevant information available in them

KU8. information available in contractual documents and drawings and client briefings relevant to planning for plumbing projects

KU9. techniques to interpret project documents and technical inputs

KU10. Mechanical, Electrical and Plumbing (MEP) activities being performed for plumbing projects and their sequence

KU11. purpose and process of site survey for project strategy and design

KU12. site survey checklist

KU13. purpose and key elements of design basis report (DBR) for facilitating the project design

KU14. project planning essentials

KU15. information in plumbing project design and specifications relevant to planning a project

KU16. various constraints that can impact the planning for a plumbing project

KU17. steps involved in preparing estimations, costing and budget reports

KU18. tools for planning and scheduling
KU19. importance of obtaining approval from authority before finalising plan
KU20. piping material specifications (PMS) used as per the plumbing design
KU21. various symbols, dimensions, terminology and key features of plans
KU22. techniques to evaluate the existing design of buildings
KU23. importance of drawing observations from project documents
KU24. considerations for plumbing project design drawings and their approvals
KU25. factors that help to calculate the timelines, costs involved, and quantity of materials required
KU26. measurements and hydraulic calculations for resource planning for plumbing and fire protection systems
KU27. importance of accuracy in identification of measurements and calculations with respect to plumbing work
KU28. tools and equipment to be used for various tasks as per required specifications
KU29. different types of materials (CI/GI/PVC pipes, etc.), basic sanitary fittings (valves, clamps, elbows, etc.) and fixtures (showers, taps, basins, etc.)
KU30. optimal solutions for technical problems faced during plumbing tasks
KU31. importance of timely delivery of materials to the site
KU32. key considerations verify supplier's and contractor's bills
KU33. how to estimate manpower requirements based on the work plan
KU34. procurement and contracting needs of project and site
KU35. how to identify potential suppliers and contractors
KU36. requisitioning process for ordering tools, equipment and supplies
KU37. stockroom processes
KU38. importance of verify contractor's and supplier's bills
KU39. purpose of work schedules, work plans, charts, work bulletins and memos and the work-related information that can be obtained from them
KU40. plumbing site preparation activities
KU41. plumbing site facilities
KU42. quality assurance/quality control (QA) (QC) measures at a plumbing site
KU43. QA and QC duties as per Municipal Accounting Manual (MAM)
KU44. workplace safety requirements and the health and safety hazards at the workplace

Generic Skills (GS)

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

GS1. prepare checklists for reference
GS2. fill out forms, make lists of materials required, and write simple reports in local language or Hindi or English about work specifications, requirements and status etc.
GS3. perform arithmetic calculations
GS4. read and interpret information from various written sources of work-related information in local language or Hindi or English
GS5. read plumbing related symbols, dimensions, terminology and dates in English

GS6. state information, doubts and concerns about work related matters in local language or Hindi or English
GS7. participate in workplace conversations and meetings and communicate by
GS8. telephone in local language or Hindi or English
GS9. share inputs with personnel associated with the project
GS10. plan in consultation with the team
GS11. spot discrepancies or errors and select the most efficient solution
GS12. decide the timelines for the project in hand
GS13. plan one's day to day tasks to achieve maximum productivity
GS14. establish priorities and deadlines in consultation with others and record them
GS15. manage multiple sites accordingly
GS16. manage distractions and maintain workplace discipline
GS17. listen to client briefings and client requirements
GS18. convey thoughts and suggestions to the client for the betterment of the project
GS19. identify information needs for effective problem solving and its possible sources
GS20. use basic questioning techniques to identify sources of errors and problems
GS21. determine key considerations and priorities when faced with problems
GS22. evaluate proposed solution with respect to key priorities and considerations
GS23. breakdown relevant work process into its constituent activities for ease of analysis
GS24. identify ways to increase productivity and reduce errors
GS25. evaluate how specific habits, attitudes and work practices of employees impact overall work culture and performance

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Identify requirements	**5**	**10**	**1.5**	**1.5**
PC1. identify the objectives and considerations for the work from stakeholders inputs and studying the contract and drawings	0.5	1	0.25	0.25
PC2. compile relevant information from the client briefing and technical inputs from concerned authorities	0.5	1	0.25	0.25
PC3. survey the site to identify impact of local conditions on project strategy and design	1	2	0.25	0.25
PC4. prepare design basis report (DBR) for facilitating the project design	1	3	0.25	0.25
PC5. communicate the inputs obtained through site surveys to the designers and management for modifications	1	1.5	0.25	0.25
PC6. provide technical support to architects, design engineers and experts to strengthen the designs	1	1.5	0.25	0.25
Plan and schedule work activities	**5**	**5**	**1.5**	**2**
PC7. extract relevant information from plumbing project design and specifications	1	1	0.25	0.25
PC8. plan a strategy for completion of plumbing project within the given budgets and constraints	1	1	0.25	0.25
PC9. prepare estimations, costing and budget reports for the project	1	1	0.25	0.5
PC10. schedule various tasks to be performed for the plumbing project	1	1	0.25	0.5
PC11. share plan and schedule with the management team and obtain their approval	1	1	0.5	0.5
Ensure availability of required resources	**10**	**20**	**5**	**3**
PC12. perform measurements and hydraulic calculations to identify the required equipment and materials for the plumbing project	1	2	0.5	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. estimate manpower requirements based on the work plan	1	2	0.5	0.25
PC14. determine adjustments required in timelines, costs and quantity of materials in line with the proposed design	1	2	0.5	0.25
PC15. identify potential suppliers for sourcing manpower, equipment and material at the work site	1	2	0.5	0.25
PC16. negotiate and agree a price with vendors	1	2	0.5	0.25
PC17. order for tools, equipment and supplies as required for the project	1	2	0.5	0.25
PC18. facilitate contracting for manpower supply as per requirement	1	2	0.5	0.25
PC19. follow up with vendors for material delivery as per standard operating procedure (SOP)	1	2	0.5	0.5
PC20. ensure adequate stock of equipment and supplies in the stockroom	1	2	0.5	0.25
PC21. verify contractors' and suppliers' bills for manpower, equipment and materials	1	2	0.5	0.25
Initiate the project	**10**	**15**	**2**	**3.5**
PC22. prepare the site for the project including setting boundaries and signage, clearing waste and hazards, levelling the area, etc.	1.5	3	0.25	0.5
PC23. organise for necessary facilities at project site such as water, electricity, toolrooms, washrooms, etc.	1.5	2	0.25	0.5
PC24. prepare site diaries and work allocation sheets for the project undertaken	1.5	2	0.25	0.5
PC25. prepare detailed work plans for the execution team	1.5	2	0.25	0.5
PC26. allocate work and provide instructions to the team	1.5	2	0.25	0.5

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC27. handover all the project documents to the supervisor prior to starting the work	1.5	2	0.25	0.5
PC28. ensure that quality assurance (QA) / quality control (QC) measures are implemented for various activities/items as per plan	1	2	0.5	0.5
NOS Total	**30**	**50**	**10**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	PSC/N0156
NOS Name	Plan and Initiate a Plumbing Project
Sector	Plumbing
Sub-Sector	Industrial / Non-Industrial Plumbing
Occupation	Plumbing Systems Installation and Maintenance
NSQF Level	5.5
Credits	9
Version	1.0
Next Review Date	NA

PSC/N0157: Monitor Work at a Plumbing Worksite

Description

This unit is about monitoring the activities being performed to facilitate plumbing projects as per required standards and specifications.

Scope

The scope covers the following :

- Inspect the work progress
- Take corrective action
- Liaise with stakeholders

Elements and Performance Criteria

Inspect the work progress

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

PC1. track the work under progress at various sites as per calculations, layouts and schematic mark-ups defined

PC2. record the status of work being performed at the worksite

PC3. check plans, drawings and quantities for accuracy of calculations relevant to the project

PC4. check whether the piping installations and fixtures are in adherence to project drawing and specifications

PC5. ensure that the materials being used, and work performed is in accordance with the required specifications

PC6. check the material consumption to identify wastage

PC7. check if proper documentation for materials stocking and consumption is being maintained at the work site

PC8. compare the progress of work with the milestones defined in the project plan

PC9. check whether the tools, equipment and materials are stored as per manufacturer’s instructions

PC10. inspect the quality of products that are being received at the work site

PC11. perform quality inspection, joint measurement and billing for running account (RA) of an ongoing project

PC12. inspect all the installed systems for proper functioning as per delivery standards

PC13. check that the scrap generated during work activities is disposed in a timely and industry prescribed manner

PC14. check if the workforce adheres to health and safety (HSE) norms at the work site

PC15. maintaining logs related to day-to-day execution and planning of work and resources

PC16. report work progress and requirements to the project managers, project engineers, contractors etc.

Take corrective action

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

PC17. evaluate the reason of delay and discrepancies from plan
PC18. consult with team for possible remedies
PC19. provide suggestions for technical problems witnessed anytime during plumbing tasks
PC20. modify work plan to incorporate corrective actions
PC21. provide instructions to team about the changes in plan

Liaise with stakeholders

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

PC22. liaise with project consultants, subcontractors, supervisors, planners, quantity surveyors and general workforce for resolving routine problems
PC23. liaise with the procurement department to ensure that there are adequate resources present at the worksite
PC24. inform clients and their representatives about the work progress and deviations from plan and their reasons
PC25. liaise with the local authority to ensure compliance with local regulations and by-laws

Commission the project

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

PC26. test the installed systems for proper functioning
PC27. test the installed systems for leakages and/or damages
PC28. check the pressure and characteristic of water flow in just installed system
PC29. identify and rectify any anomalies which arise during commissioning exercise
PC30. coordinate with civil team, finishing team, mechanical electrical plumbing (MEP) design team, consultant, and contractor for the clearances
PC31. train owner's staff in equipment maintenance and systems operation
PC32. guide the plumbing team in conducting the handover exercise
PC33. prepare the handover documentation and project completion report

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. organisational quality procedures, processes and delivery standards
KU2. risk and impact of not following defined procedures/work instructions
KU3. organisational process for performance evaluation
KU4. standards applicable to the piping installation in plumbing
KU5. types and purpose of drawings and plans associated with plumbing and their functions
KU6. tools, equipment and materials relative to drawings/specifications
KU7. techniques related to cutting, bending and joining of fittings and fixtures
KU8. key considerations to evaluate the blueprints as given by the design team
KU9. importance of accuracy in identification of measurements and calculations with respect to plumbing work
KU10. various symbols, dimensions, terminology and key features of plans
KU11. how to check site plans, drawings and quantities for accuracy of calculations
KU12. key considerations to review the specifications of the materials

KU13. methods to analyse material consumption and ensure minimal wastage
KU14. various types of defects such as leakages, improper alignment, etc
KU15. various test used to check for proper installation and functioning of plumbing systems
KU16. common problems that cause delay and discrepancies in a plumbing project fulfilment and possible corrective measures and work arounds
KU17. process of documentation to be followed for the plumbing project
KU18. techniques to dispose the scrap generated during plumbing tasks
KU19. storage procedure for materials and equipment relevant to the project
KU20. quality inspection process
KU21. joint measurement process
KU22. procedure to be followed to inspect buildings for plumbing requirements
KU23. the commissioning process
KU24. required pressure, flow and temperature of water at different outlets
KU25. typical issues or faults that can arise during commissioning exercise
KU26. methodology to rectify the issues that can arise during commissioning exercise
KU27. NEPA, NBC standards for plumbing
KU28. health and safety norms applicable at the workplace

Generic Skills (GS)

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

GS1. prepare checklists, fill out forms and make lists of materials required
GS2. write detailed reports
GS3. read and interpret information from various written sources of work-related information in local language or Hindi or English
GS4. communicate work instructions and provide feedback on work done
GS5. listen to grievances from various individuals within the team
GS6. manage multiple teams
GS7. improve the work process and team productivity
GS8. decide the timelines for the project in hand through proper analysis
GS9. plan one's daily tasks to achieve maximum productivity
GS10. establish priorities and deadlines in consultation with others and record them
GS11. spot discrepancies or errors and select the most efficient solution
GS12. identify information needs for effective problem solving and its possible source
GS13. use basic questioning techniques to identify sources of errors and problems
GS14. determine key considerations and priorities when faced with problems
GS15. evaluate proposed solution with respect to key priorities and considerations
GS16. breakdown relevant work process into its constituent activities for ease of analysis
GS17. identify ways to increase productivity and reduce errors
GS18. analyse impact of local contextual factors on work plan and requirements, including time, costs and quality

GS19. evaluate how specific habits, attitudes and work practices of employees impact overall work culture and performance

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Inspect the work progress	**15**	**22**	**4**	**4**
PC1. track the work under progress at various sites as per calculations, layouts and schematic mark-ups defined	0.5	1	0.25	0.25
PC2. record the status of work being performed at the worksite	0.5	1	0.25	0.25
PC3. check plans, drawings and quantities for accuracy of calculations relevant to the project	1	1.5	0.25	0.25
PC4. check whether the piping installations and fixtures are in adherence to project drawing and specifications	1	1.5	0.25	0.25
PC5. ensure that the materials being used, and work performed is in accordance with the required specifications	1	1.5	0.25	0.25
PC6. check the material consumption to identify wastage	1	1	0.25	0.25
PC7. check if proper documentation for materials stocking and consumption is being maintained at the work site	1	1	0.25	0.25
PC8. compare the progress of work with the milestones defined in the project plan	1	1	0.25	0.25
PC9. check whether the tools, equipment and materials are stored as per manufacturer's instructions	1	1	0.25	0.25
PC10. inspect the quality of products that are being received at the work site	1	1.5	0.25	0.25
PC11. perform quality inspection, joint measurement and billing for running account (RA) of an ongoing project	1	2	0.25	0.25
PC12. inspect all the installed systems for proper functioning as per delivery standards	1	2	0.25	0.25
PC13. check that the scrap generated during work activities is disposed in a timely and industry prescribed manner	1	1	0.25	0.25

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. check if the workforce adheres to health and safety (HSE) norms at the work site	1	2	0.25	0.25
PC15. maintaining logs related to day-to-day execution and planning of work and resources	1	2	0.25	0.25
PC16. report work progress and requirements to the project managers, project engineers, contractors etc.	1	1	0.25	0.25
Take corrective action	**4**	**8**	**2.5**	**1.5**
PC17. evaluate the reason of delay and discrepancies from plan	1	2	0.5	0.25
PC18. consult with team for possible remedies	1	2	0.5	0.25
PC19. provide suggestions for technical problems witnessed anytime during plumbing tasks	0.5	1.5	0.5	0.25
PC20. modify work plan to incorporate corrective actions	1	1.5	0.5	0.5
PC21. provide instructions to team about the changes in plan	0.5	1	0.5	0.25
Liaise with stakeholders	**4**	**8**	**2**	**2.5**
PC22. liaise with project consultants, subcontractors, supervisors, planners, quantity surveyors and general workforce for resolving routine problems	1	2	0.5	1
PC23. liaise with the procurement department to ensure that there are adequate resources present at the worksite	1	2	0.5	1
PC24. inform clients and their representatives about the work progress and deviations from plan and their reasons	1	2	0.5	0.25
PC25. liaise with the local authority to ensure compliance with local regulations and by-laws	1	2	0.5	0.25
Commission the project	**7**	**12**	**1.5**	**2**
PC26. test the installed systems for proper functioning	1	1.5	-	0.25

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC27. test the installed systems for leakages and/or damages	1	1.5	0.25	0.25
PC28. check the pressure and characteristic of water flow in just installed system	1	1.5	0.5	0.25
PC29. identify and rectify any anomalies which arise during commissioning exercise	1	1.5	-	0.25
PC30. coordinate with civil team, finishing team, mechanical electrical plumbing (MEP) design team, consultant, and contractor for the clearances	1	2	0.5	0.25
PC31. train owner's staff in equipment maintenance and systems operation	0.5	1.5	-	0.25
PC32. guide the plumbing team in conducting the handover exercise	0.5	1.5	0.25	0.25
PC33. prepare the handover documentation and project completion report	1	1	-	0.25
NOS Total	**30**	**50**	**10**	**10**

National Occupational Standards (NOS) Parameters

NOS Code	PSC/N0157
NOS Name	Monitor Work at a Plumbing Worksite
Sector	Plumbing
Sub-Sector	Industrial / Non-Industrial Plumbing
Occupation	Plumbing Systems Installation and Maintenance
NSQF Level	5.5
Credits	10
Version	1.0
Next Review Date	NA

PSC/N0136: Apply Health and Safety Practices at the Workplace

Description

This unit is about following safety procedures, communicating potential hazards and dangers of accidents on the job.

Scope

The scope covers the following :

- Follow safety measures to avoid accidents
- Daily inspection of tools and equipment
- Deal with emergencies

Elements and Performance Criteria

Follow safety measures to avoid accidents

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

PC1. identify risks and hazards at the workplace

PC2. wear personal protective equipment (PPE) as per the type of plumbing work

PC3. place protective barricades and signages around the pits and trenches

PC4. isolate the plumbing fittings and fixtures from electrical wiring to avoid accidents

PC5. adhere to organisational procedures for reporting hazards and incidents to relevant authorities

PC6. establish ventilation before entering underground work areas

PC7. work safely in and around trenches, elevated places and confined areas

PC8. ensure tools and hazardous materials are not left unattended

PC9. ensure good housekeeping in order to prevent hazards e.g. fire

PC10. dispose waste materials and used PPE according to regulations and codes of practice

Follow hygiene and sanitation practices

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

PC11. follow recommended personal hygiene and sanitation practices, for example, washing/sanitizing hands, covering face with a bent elbow while coughing/sneezing etc.

PC12. clean and disinfect work area, materials/supplies, equipment etc. before and after use.

PC13. report hygiene and sanitation issues to appropriate authority

Use tools, equipment and materials safely

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

PC14. check that the tools, equipment and materials are in good condition and as per industry standards before use

PC15. use power tools and machinery that are grounded

PC16. replace or repair split or loose tools before use

PC17. store and transport various plumbing materials safely

Deal with emergencies

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

PC18. follow workplace emergency and evacuation procedures

PC19. use a fire extinguisher correctly

PC20. use safe methods to free a person from electrocution

PC21. administer appropriate first aid (such as CPR etc.) to victims in case of cuts, bleeding, burns, choking, electric shock, poisoning etc.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. possible causes of risk, hazard or accident in the workplace

KU2. organisational procedures for upkeep of tools and plumbing materials, health and safety

KU3. location of all the general health and safety equipment in the workplace

KU4. meaning of hazards and risks

KU5. hazardous environment encountered during work such as underground areas, elevated areas, areas with water and electricity supply, presence of biological waste, under construction sites etc.

KU6. work practices and precautions to control and prevent risks, hazards and accidents

KU7. importance of each personal protective equipment used such as eye protection mask, hard hats, gloves, apron, rubber boots etc.

KU8. tools and plumbing equipment as per latest industry standards

KU9. preventative and remedial actions to be taken in case of exposure to toxic materials

KU10. specific safety and health related problems faced in domestic, commercial and institutional setups

KU11. various causes of fire and precautionary activities to prevent the fire accident

KU12. techniques of using the different fire extinguishers

KU13. rescue techniques applied during a fire hazard

KU14. various types of safety signs and meaning

KU15. appropriate basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, minor burns, poisoning, eye injuries etc.

KU16. potential injuries and ill health associated with incorrect handing of tools and equipment

Generic Skills (GS)

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

GS1. write an accident/incident report in local language or English

GS2. read and comprehend labels, charts, signages, manuals, plumbing symbols etc.

GS3. question coworkers appropriately in order to clarify instructions and other issues

GS4. plan and organize the work schedule, work area, tools, equipment and materials for improved productivity

GS5. determine key considerations and priorities when faced with problems

GS6. seek official and authorised sources of help and guidance to resolve problems that cannot be solved at one's level of authority

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Follow safety measures to avoid accidents	**13**	**32**	**-**	**3**
PC1. identify risks and hazards at the workplace	2	2	-	0.5
PC2. wear personal protective equipment (PPE) as per the type of plumbing work	2	2	-	0.5
PC3. place protective barricades and signages around the pits and trenches	1	4	-	0.5
PC4. isolate the plumbing fittings and fixtures from electrical wiring to avoid accidents	1	4	-	-
PC5. adhere to organisational procedures for reporting hazards and incidents to relevant authorities	2	4	-	0.5
PC6. establish ventilation before entering underground work areas	1	4	-	-
PC7. work safely in and around trenches, elevated places and confined areas	1	3	-	-
PC8. ensure tools and hazardous materials are not left unattended	1	3	-	-
PC9. ensure good housekeeping in order to prevent hazards e.g. fire	1	3	-	0.5
PC10. dispose waste materials and used PPE according to regulations and codes of practice	1	3	-	0.5
Follow hygiene and sanitation practices	**3**	**8**	**-**	**1**
PC11. follow recommended personal hygiene and sanitation practices, for example, washing/sanitizing hands, covering face with a bent elbow while coughing/sneezing etc.	1	3	-	0.5
PC12. clean and disinfect work area, materials/supplies, equipment etc. before and after use.	1	3	-	0.5
PC13. report hygiene and sanitation issues to appropriate authority	1	2	-	-
Use tools, equipment and materials safely	**6**	**9**	**-**	**1**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. check that the tools, equipment and materials are in good condition and as per industry standards before use	1	3	-	0.25
PC15. use power tools and machinery that are grounded	1	2	-	0.25
PC16. replace or repair split or loose tools before use	2	2	-	0.25
PC17. store and transport various plumbing materials safely	2	2	-	0.25
Deal with emergencies	**8**	**14**	**-**	**2**
PC18. follow workplace emergency and evacuation procedures	2	3	-	0.5
PC19. use a fire extinguisher correctly	2	4	-	0.5
PC20. use safe methods to free a person from electrocution	2	3	-	0.5
PC21. administer appropriate first aid (such as CPR etc.) to victims in case of cuts, bleeding, burns, choking, electric shock, poisoning etc.	2	4	-	0.5
NOS Total	**30**	**63**	**-**	**7**

National Occupational Standards (NOS) Parameters

NOS Code	PSC/N0136
NOS Name	Apply Health and Safety Practices at the Workplace
Sector	Plumbing
Sub-Sector	Industrial / Non-Industrial Plumbing, Water Supply & Water Treatment & Quality Control, Sewerage & Sewage Treatment, Drainage, Water Harvesting & Ground Recharging, Firefighting & Safety Systems, Gas & Piping (Industrial / Medical), HVAC & Steam, Manufacturing of Plumbing / Firefighting Products, Micro-Hydel Power
Occupation	Plumbing Systems Installation and Maintenance, Designing, Sales, Material Handling, Plumbing Servicing, Plumbing Plant Operations
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	24/02/2022
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

PSC/N0138: Implement Measures to Work Effectively

Description

This unit covers basic etiquette and competencies that a candidate requires to implement measures for effective team working and communication at the workplace.

Scope

The scope covers the following :

- Ensure team preparedness for the tasks
- Monitor completion of work as per expected standards
- Handle queries, concerns and welfare of workers
- Respect diversity

Elements and Performance Criteria

Ensure team preparedness for the tasks

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

PC1. create a work plan and schedule for the workers as per work priorities, availability of manpower, equipment and weather conditions

PC2. assign work taking full account of each team member's abilities

PC3. train the workers

Monitor completion of work as per expected standards

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

PC4. monitor project activities to ensure adherence to work instructions, schedules, budgets and targets

PC5. identify causes for any lag in performance as well as possible solutions to bridge the gap

PC6. provide feedback on individual work performance to each team member for improvement in work quality

PC7. implement measures to improve team effectiveness e.g. adhering to timelines, taking scheduled breaks, proactiveness, minimum interruptions etc.

PC8. ensure accurate and effective delivery of written communication (reports, updates etc.) to stakeholders within agreed timelines

Handle queries, concerns and welfare of workers

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

PC9. investigate work-related complaints to verify problems and record responses relevant to the project

PC10. perform administrative duties, such as authorising leaves, processing time sheets as per standard operating procedure (SOP)

PC11. review contracts or work assignments to determine service, machine, or workforce requirements for jobs

PC12. deal with conflicts among the team members in a professional manner

PC13. prepare and maintain required records, such as work activity or personnel reports

Respect diversity

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

PC14. use respectful verbal, non-verbal and written communication that is gender, disability, age and culturally sensitive

PC15. transact with all people without any personal bias based on gender, disability, caste, religion, colour, sexual orientation or culture and in accordance with their legal rights

PC16. recognize indicators of harassment and discrimination based on gender, disability, caste, religion, colour, sexual orientation or culture at workplace and follow organisational policy for reporting the same.

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. legislation, standards, policies, and procedures followed in the company relevant to employment, behaviour and performance conditions

KU2. reporting structure, inter-dependent functions, lines and procedures in the work area

KU3. relevant people and their responsibilities within the work area

KU4. escalation matrix and procedures for reporting work and employment related issues

KU5. sexual harassment of women at workplace (Prevention, Prohibition and Redressal) Act, 2013

KU6. organizational policy for harassment and discrimination based on gender, disability, caste, religion, colour, sexual orientation or culture

KU7. internal and external stakeholders at the workplace and their communication requirements

KU8. importance of effective communication in the workplace and the impact of poor communication on the employee, the employer and the customer

KU9. various components of effective communication such as tone and pitch

KU10. advantages and disadvantages of various modes of communication

KU11. importance of teamwork in organizational and individual success

KU12. goal setting

KU13. group dynamics and processes

KU14. measures to improve workplace productivity

KU15. importance of ethics and discipline for professional success

KU16. common reasons for interpersonal conflict

KU17. importance of developing effective working relationships for professional success

KU18. how to deal with grievances and problems appropriately and effectively

KU19. importance and ways of managing interpersonal conflict effectively

KU20. laws, acts and provisions defined for PwD by the statutory bodies

KU21. government and private schemes and benefits available for PwD

KU22. basic gender concepts such as gender power relations, gender roles, access and control, gender sensitivity, gender equity and equality

KU23. gender, disability, cultural and age related biases, stereotyping and its impact

KU24. actions and consequences of gendered behavior

KU25. types of harassment and discrimination based on gender, disability, caste, religion or culture that occurs at a typical workplace and how to recognize it

KU26. types of unacceptable behavior

Generic Skills (GS)

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

GS1. write clear and legible notes, instructions and maintain records in local language or English

GS2. comprehend quantities and basic work-related terminology for operational requirements

GS3. interpret information accurately from work-related documents, work instructions and records

GS4. communicate appropriately (correct protocol and manner of speaking) to understand about the type of output required and answer queries

GS5. display active listening skills while interacting with co-workers and others in the workplace

GS6. plan tasks to maintain a smooth relationship with fellow team members

GS7. plan the steps within one's limits of authority as per required modification

GS8. perform activities accurately and effectively in order to meet customer requirements

GS9. work with co-workers and supervisor to resolve any issues that threaten work quality as per the planned schedule

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Ensure team preparedness for the tasks	**6**	**11**	**2**	**2**
PC1. create a work plan and schedule for the workers as per work priorities, availability of manpower, equipment and weather conditions	2	4	1	0.5
PC2. assign work taking full account of each team member's abilities	2	4	1	0.5
PC3. train the workers	2	3	-	1
Monitor completion of work as per expected standards	**10**	**15**	**4**	**3**
PC4. monitor project activities to ensure adherence to work instructions, schedules, budgets and targets	2	3	1	0.5
PC5. identify causes for any lag in performance as well as possible solutions to bridge the gap	2	3	1	0.5
PC6. provide feedback on individual work performance to each team member for improvement in work quality	2	3	0.5	0.5
PC7. implement measures to improve team effectiveness e.g. adhering to timelines, taking scheduled breaks, proactiveness, minimum interruptions etc.	2	3	0.5	0.5
PC8. ensure accurate and effective delivery of written communication (reports, updates etc.) to stakeholders within agreed timelines	2	3	1	1
Handle queries, concerns and welfare of workers	**7**	**14**	**5**	**1**
PC9. investigate work-related complaints to verify problems and record responses relevant to the project	1	3	1	-
PC10. perform administrative duties, such as authorising leaves, processing time sheets as per standard operating procedure (SOP)	2	3	1	0.5
PC11. review contracts or work assignments to determine service, machine, or workforce requirements for jobs	2	3	1	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. deal with conflicts among the team members in a professional manner	1	3	1	0.5
PC13. prepare and maintain required records, such as work activity or personnel reports	1	2	1	-
Respect diversity	**7**	**9**	**3**	**1**
PC14. use respectful verbal, non-verbal and written communication that is gender, disability, age and culturally sensitive	3	3	1	-
PC15. transact with all people without any personal bias based on gender, disability, caste, religion, colour, sexual orientation or culture and in accordance with their legal rights	2	3	1	0.5
PC16. recognize indicators of harassment and discrimination based on gender, disability, caste, religion, colour, sexual orientation or culture at workplace and follow organisational policy for reporting the same.	2	3	1	0.5
NOS Total	**30**	**49**	**14**	**7**

National Occupational Standards (NOS) Parameters

NOS Code	PSC/N0138
NOS Name	Implement Measures to Work Effectively
Sector	Plumbing
Sub-Sector	Industrial / Non-Industrial Plumbing, Water Supply & Water Treatment & Quality Control, Sewerage & Sewage Treatment, Drainage, Water Harvesting & Ground Recharging, Firefighting & Safety Systems, Gas & Piping (Industrial / Medical), HVAC & Steam, Manufacturing of Plumbing / Firefighting Products, Micro-Hydel Power
Occupation	Plumbing Systems Installation and Maintenance, Designing, Sales, Material Handling, Plumbing Servicing
NSQF Level	5
Credits	TBD
Version	1.0
Last Reviewed Date	24/02/2022
Next Review Date	24/02/2025
NSQC Clearance Date	24/02/2022

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	-	-	-	-
PC10. calculate income, expenses, savings etc.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
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	31/03/2024
NSQC Clearance Date	31/03/2021

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each Element/ PC.

2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.

3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.

4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).

5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.

6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.

7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Minimum Aggregate Passing % at QP Level : 80

(**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
PSC/N0156.Plan and Initiate a Plumbing Project	30	49	12	9	100	30
PSC/N0157.Monitor Work at a Plumbing Worksite	30	49	14	7	100	30
PSC/N0136.Apply Health and Safety Practices at the Workplace	30	63	-	7	100	15
PSC/N0138.Implement Measures to Work Effectively	30	49	14	7	100	15
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	-	-	50	10
Total	**140**	**240**	**40**	**30**	**450**	**100**

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
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.
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 Standard	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 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	Knowledge and Understanding (KU) are statements that together specify the technical, generic, professional and organisational specific knowledge that an individual need 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	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 those OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS or 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 or 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.

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 Standard	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 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	Knowledge and Understanding (KU) are statements that together specify the technical, generic, professional and organisational specific knowledge that an individual need 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	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 those OS, these include communication related skills that are applicable to most job roles.

Electives	Electives are NOS or 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 or 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.
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 Standard	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 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	Knowledge and Understanding (KU) are statements that together specify the technical, generic, professional and organisational specific knowledge that an individual need 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	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 those OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS or 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 or 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.
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 Standard	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 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	Knowledge and Understanding (KU) are statements that together specify the technical, generic, professional and organisational specific knowledge that an individual need 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.
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