



QUALIFICATION FILE

Plumber - General

- Short Term Training (STT) Long Term Training (LTT) Apprenticeship
 Upskilling Dual/Flexi Qualification For ToT For ToA
 General Multi-skill (MS) Cross Sectoral (CS) Future Skills OEM

NCrF/NSQF Level: 4

Submitted By:

< Water Management and Plumbing Skill Council >

< Address: 606 & 609, Tower-C, DLF Prime Towers, Phase I, Okhla, New Delhi, 110020, Tel: 011 – 4151 3580 >

Section 1: Basic Details

1.	Qualification Name	Plumber - General	
2.	Sector/s	Water Management and Plumbing	
3.	Type of Qualification: <input type="checkbox"/> New <input checked="" type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version previous/existing qualification: 2021/PLUM/IPSC/04279, version 4.0	Qualification Name of existing/previous version: Plumber – General
4.	a. OEM Name b. Qualification Name (Wherever applicable)		
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-04-PL-03441-2024-V2-WMPS Version – 5.0	6. NCrF/NSQF Level: 4
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other) (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate	
8.	Brief Description of the Qualification	The Plumber - General installs and maintains sewage and drainage systems, water supply systems, sanitary fittings and fixtures and plumbing systems for advanced sanitary fixtures in housing, commercial and institutional setups.	

<p>9. Eligibility Criteria for Entry for Student/Trainee/Learner/Employee</p>	<p>a. Entry Qualification & Relevant Experience: The candidate must be aligned to specific age criteria for the trade Plumber General</p> <table border="1" data-bbox="940 337 1942 794"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12th grade Pass</td> <td></td> </tr> <tr> <td>2</td> <td>Pursuing 3rd year of 3-year diploma after 10th</td> <td></td> </tr> <tr> <td>3</td> <td>10th grade pass with 1-year NTC plus CITS (or NAC)</td> <td></td> </tr> <tr> <td>4</td> <td>8th grade pass with 2-year NTC plus 1-year NAC plus 1-year CITS</td> <td></td> </tr> <tr> <td>5</td> <td>Previous relevant Qualification of NSQF Level (3 as Assistant Plumber – General with 8th Grade Pass)</td> <td>2 Years of experience Relevant</td> </tr> </tbody> </table> <p>b. Age: <18 Years ></p>						S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	12th grade Pass		2	Pursuing 3rd year of 3-year diploma after 10th		3	10th grade pass with 1-year NTC plus CITS (or NAC)		4	8th grade pass with 2-year NTC plus 1-year NAC plus 1-year CITS		5	Previous relevant Qualification of NSQF Level (3 as Assistant Plumber – General with 8th Grade Pass)	2 Years of experience Relevant
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<p>10. Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))</p>	<p>15</p>	<p>11. Common Cost Norm Category (I/II/III) (wherever applicable): I</p>																						
<p>12. Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)</p>	<p>NA</p>																							
<p>13. Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</p>	<p><input checked="" type="checkbox"/>Offline <input type="checkbox"/>Online <input type="checkbox"/>Blended</p> <table border="1" data-bbox="940 1154 1984 1330"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>120</td> <td>270</td> <td>60</td> <td>-</td> <td>450</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><i>(Refer Blended Learning Annexure for details)</i></p>					Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	120	270	60	-	450	Online						
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																			
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14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/7126.0101
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Plumbing Supervisor
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:
18.	Is the Job Role Amenable to Persons with Disability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "Yes", specify applicable type of Disability: <i>Locomotor Disability</i>
19.	How Participation of Women will be Encouraged	No Gender Sensitization
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (PSC/N0136, PSC/N0142)
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Water Management and Plumbing Skill Council Email: Gunjan.aneja@wmpsc.in , standards@wmpsc.in Contact No.: 9555377052, 7906577202 Website: www.wmpsc.in
23.	Final Approval Date by NSQC: 17-12-2024	24. Validity Duration: 3 years
		25. Next Review Date: 17-12-2027

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.** -Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					Weightage (%) (if applicable)	
						Th.	Pr.	OJT - Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total		
1	Prepare for Plumbing Installations and Maintenance	PSC/N0130, v3.0	Core	4	2.5	20	35	20		75	15	30		5	50	15	
2	Install Water Supply Systems	PSC/N0131, v2.0	Core	4	3	20	60	10		90	15	30		5	50	20	
3	Install Drainage Systems	PSC/N0132, v2.0	Core	4	3	20	60	10		90	15	30		5	50	20	
4	Install Plumbing Fixtures	PSC/N0133, v2.0	Core	4	2	10	40	10		60	15	30		5	50	20	
5	Perform Troubleshooting and Maintenance for Domestic Plumbing Fixtures and Systems	PSC/N0142, v2.0	Core	4	2	10	40	10		60	15	30		5	50	10	
6	Apply Health and Safety Practices at the Workplace	PSC/N0136, v2.0	Non-Core	4	0.5	10	5			15	30	60		10	100	5	
7	Employability Skills (60 Hours)	DGT/VSQ/N0102, v1.0	Non-Core	4	2	30	30			60	20	30			50	10	
Duration (in Hours) / Total Marks						15	120	270	60		450	125	240		35	400	100

Elective NOS/s:

N/A

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Perform Installation of Insulation on Pipes	PSC/N0183 , v1.0	core	4	1	10	20	-	-	30	15	30	-	5	50	15
Duration (in Hours) / Total Marks						10	20	-	-	30	15	30	-	5	50	15

Assessment - Minimum Qualifying PercentagePlease specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: _____ % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B.Tech in Civil / Mechanical Engineering with 2 years of Relevant Industry Experience and 1 year of Relevant Teaching Experience OR Diploma in Civil / Mechanical Engineering with 3 years of Relevant Industry Experience and 1 year of Relevant Teaching Experience OR 10 th + ITI in plumbing with 4 years of relevant Industry Experience and 1 year Training Experience in Plumbing OR CITS Certified Trainer (Plumber Trade)
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	M.Tech in Civil / Mechanical Engineering/Relevant Master degree with 3 years of Relevant Industry Experience and 1 years of Relevant Teaching Experience OR B.Tech in Civil / Mechanical Engineering/Relevant Undergraduate degree with 5 years of Relevant Industry Experience and 2 years of Relevant Teaching Experience
3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B.Tech in Civil / Mechanical Engineering with 2 years of Relevant Industry Experience and 1 year of Relevant Teaching Experience OR
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		Diploma in Civil / Mechanical Engineering with 3 years of Relevant Industry Experience and 1 year of Relevant Teaching Experience OR 10 th + ITI in plumbing with 4 years of relevant Industry Experience and 1 year Training Experience in Plumbing
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma in any Stream with 2 Year of Relevant Experience OR Graduation in Any Stream with 1 Year of Relevant Experience OR 12 th Grade Pass in any stream with 3.5 years of Relevant Experience
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	M.Tech in Civil / Mechanical Engineering or Graduation in relevant stream with 3 years of Relevant Industry Experience and 2 years of Relevant Teaching Experience OR B.Tech in Civil / Mechanical Engineering with 5 years of Relevant Industry Experience and 2 years of Relevant Teaching Experience
4.	Assessment Mode (Specify the assessment mode)	Both Digitized and Non-digitized Mode
5.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): No
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): No
3.	Government /Industry initiatives/ requirement (Yes/No): No

4.	Number of Industry validation provided: 21
5.	Estimated nos. of persons to be trained and employed: 80,000
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: No If “No”, why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrF/NSQF level justification based on NCrF level/NSQF descriptors <i>(Mandatory)</i>	Attached
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Attached
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Attached
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Attached
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is “Blended Learning”)</i>	
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	Not Required
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Attached
9.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	Attached
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	Attached
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	Attached
12.	Any other document you wish to submit:	

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
<p>Professional Theoretical Knowledge/Process</p>	<p>Work in familiar, predictable, routine, situation of clear choice.</p> <ul style="list-style-type: none"> • determine quantities of plumbing material required and their dimensions by performing calculations based on information available on the plumbing plans • select appropriate tools and equipment required for installation of the pipes • select size, type and quantity of pipes, tubings, fittings and other accessories required to install the plumbing pipes • inspect pipes, tubings, fittings and other accessories visually before installation to detect faults such as damage, cracks, debris, faulty threading, etc. • identify the area where the assembled pipes are to be installed • check pressure level in pipes using required tools and technologies • ensure all installations are properly sized and supported • check completed installation for correct functioning • rectify faults within limits of expertise and authority of a plumber • identify fault in case pipework is not functioning • inspect drainage and plumbing systems for any cracks and leaks • detect, locate and repair leaks in the pressure gauges • detect, analyse and repair faulty plumbing equipment within domestic households • inspect and resolve issue of pipe bursting in winters • inspect and maintain the septic systems on a timely basis 	<p>The Plumber - General during the job works in familiar, predictable, routine, situation of clear choice. Refer to the evidences provided in the adjacent column. Hence it falls under Level 4.</p>	<p>4</p>

	<ul style="list-style-type: none"> • check compliance of plumbing systems with local and national regulations and update as required • detect leaks under a sink or in a wall • mathematical formulas needed to calculate pipe length and piping offsets • process of mains supply of water and drainage • ensure that electrically driven power tools and machinery are grounded • handle and store various plumbing materials safely • ensure there are no tools left unattended on ledges, stepladders, on beams and near the edges of scaffolds • check the presence of hazardous materials at the work site and clear it as per industry approved guidelines • Ensure that the pipes are laid out logically, with minimal sharp turns, appropriate distances, and efficient use of space. • Verify that hot and cold water lines are correctly separated and insulated where necessary to prevent heat transfer. • Interpret the placement of these fixtures and their connections to the supply and drainage systems helps in understanding how water will flow throughout the building. • Ensure that the pipe diameters are adequate for the anticipated water flow and pressure for both the water supply and drainage systems. • Anticipate that all plumbing fixtures (sinks, toilets, showers) are positioned according to the architectural plan, with proper spacing for usability and maintenance. • Ensure that each fixture has clearly indicated connection points for water supply. • Perform verification that all horizontal drainage pipes have the correct slope (usually 1/4" per foot) to allow for efficient wastewater flow. • Check all fixtures are properly vented to avoid issues like siphoning of traps, sewer gas escape, or slow drainage. 		
<p>Professional and Technical Skills/ Expertise/</p>	<p>Factual knowledge of field of knowledge or study.</p> <ul style="list-style-type: none"> • tools, equipment and materials relative to drawings/specifications • measurements, calculations and quantities • standards relevant to the plumbing industry 	<p>The Plumber - General should possess the practical</p>	<p>4</p>

<p>Professional Knowledge</p>	<ul style="list-style-type: none"> • the metric (MKS) and FBS system of measurement • various symbols, dimensions, terminology and key features of plans • ISI specification of pipes • mathematical formulas needed to calculate area, length, perimeter, diameter, circumference, volume, mass, force, pressure, scales, ratios • environmental plans, air and water contamination, erosion and sedimentation • properties of water, including pressure and flow rates • electrolysis and problems associated with the use of dissimilar metals • explain the various techniques of installing the water piping system in a building such as overground piping, underground piping, piping embedded in <ul style="list-style-type: none"> • concrete, concealed piping, wall mounted piping • layout of piping systems • types and grades of pipes and fittings used in water supply systems • types and grades of fastening hardware such as studs, bolts and nuts • types of supports, hangers and restraints, and their properties • various fit off processes and their tools and principles • processes of marking out, plumbing materials characteristics of various metal materials and their compatibility with different fabrication methods • the application of mechanical and hydraulic principles for clearing blockages • corrosion protection such as coatings and tape • clear the work area and disposed of, reuse or recycle left over materials according to legislation, regulations, codes of practice and job specification • clean, check, maintain and store tools and equipment according to manufacturer recommendations and workplace procedures. • how to explain the various techniques of installing the water piping system in a building such as overground piping, underground piping, piping embedded • function of each component of a drainage system 	<p>knowledge of his field. Refer to the evidences provided in the adjacent column. Hence it falls under Level 4.</p>	
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	<ul style="list-style-type: none"> • the process in which wastewater drainage happens in buildings • how waste moves from a fixture through the drain system to the environment • pipe wrenches, adjustable spanners, pipe cutters, pliers, and plungers, etc. • function of each tool such as tightening pipes, cutting materials, or gripping components. • Knowledge of specialized equipment like pipe threaders, soldering torches, drain cleaning machines, and pipe benders is important in complex installations and maintenance tasks. • working of tools like pressure gauges, leak detectors, and measuring is essential for troubleshooting and ensuring accuracy in installation. • read and use diagnostic tools helps in identifying issues and ensuring proper alignment and sealing in the plumbing system. • different types of standardized symbols used to represent various components like pipes, fixtures, valves, and fittings. • different types of views such as plan view, isometric drawings, Cross-sectional view, and detail drawings • Techniques of jointing of different pipes, their slope (for drainage), and how they run through the building are necessary for effective system interpretation and troubleshooting. • electrolysis and problems associated with the use of dissimilar metals • characteristics and the application of different pipe fittings and fixture supports, including fixing and jointing techniques • standard measuring procedures such as centre-to-centre, end-to-centre, and end-to-end • various fit off processes and their tools and principles • installation process of pipes and fittings for various plumbing applications • the application of mechanical and hydraulic principles for clearing blockages • types of plumbing related fixtures • types of supports such as carriers, blocking and wall hangers • types of fasteners such as anchors, bolts and clamps 		
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	<ul style="list-style-type: none"> • fixture materials and finishes and uses and limitations of each • principles of siphon ball valves in a flushing system • types of wash basin, its standard sizes • description and sizes of pantry, laundry sinks and waste outlets. • description of the bath tub and the accessories required for installing a bath tub • importance of introducing the traps of the sanitary fittings, both deep seal traps and low seal traps. • mathematical formulas needed to calculate pipe length and piping offsets • process of mains supply of water and drainage • mathematical formulas needed to calculate pipe length and piping offsets • process of mains supply of water and drainage • demonstrate the correct use of a fire extinguisher • demonstrate the artificial respiration and the CPR Process • demonstrate how to free a person from electrocution • demonstrate correct method to move injured people and others during an emergency • limitations of keeping tools at improper places • possible causes of risk and accident • methods of accident prevention • safe working practices when working with tools and machines • safe working practices while working at various hazardous sites • various dangers associated with the use of electrical equipment • safety belts and lifelines while working at elevated structures • accessories used in the tools for carrying out plumbing task • various causes of fire • rescue techniques applied during a fire hazard • various types of safety signs and what they mean • importance of effective communication in the workplace • key elements of active listening 		
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	<ul style="list-style-type: none"> • importance of tone and pitch in effective communication • importance of ethics for professional success • importance of discipline for professional success • common reasons for interpersonal conflict 		
<p>Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill</p>	<p>Language to communicate written or oral, with required clarity</p> <ul style="list-style-type: none"> • report any difficulties or problems that may arise with the pipe fitting activities, and carry out any agreed actions • inform relevant authority in case any shortcoming or fault is observed • demonstrate the correct use of a fire extinguisher • demonstrate the artificial respiration and the CPR Process • demonstrate how to free a person from electrocution • demonstrate correct method to move injured people and others during an emergency • obtain complete information and instructions from the supervisor and fellow workers, getting clarification where required • pass information to authorized people who require it, accurately and within agreed timescale and confirm its receipt • give information to others clearly, at a pace and in a manner that helps them to understand • display appropriate communication etiquette while working • display active listening skills while interacting with others at work • use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism • demonstrate responsible and disciplined behavior at the workplace • identify team and individual goals and timelines and work to meet them • display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible • consult with and assist others to maximize effectiveness and efficiency in carrying out tasks • escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict 	<p>The Plumber - General should have practical skills which are routine and repetitive and should use quality concepts. Refer to the evidences provided in the adjacent column. Hence it falls under Level 4.</p>	<p>4</p>

	<p>Skill to basic arithmetic and algebraic principles</p> <ul style="list-style-type: none"> • tally the count and quality of pipes, tubings, fittings and other accessories provided in the packing with the manufacturer’s list provided or order form • calculate quantity, dimensions and type of pipes, pipe fittings, devices and materials required from design drawings / specifications • measure and mark dimensions for fabrication on the pipes and fittings making allowances for spring-back, distortion and assembly • tally the count and quality of fixtures, parts, support material provided in the packing with the manufacturer’s list provided or order form <p>basic understanding of social political and natural environment.</p> <ul style="list-style-type: none"> • identify hazards at the work area and take measures to migrate the hazards or report the same to authorized personnel • clear the area of unnecessary items, debris and waste as per organizational norms • erect signage and barricades as required to ensure safety and security of work area, workers and visitors • plan and sequence tasks in agreement with others involved in or affected by the work, while adhering to time commitments • clear work area to a safe and tidy condition on completion of the assembly activities • clear the work area and disposed of, reuse or recycle left over materials according to legislation, regulations, codes of practice and job specification • prepare work area to support efficient installation of plumbing pipes • replace faulty/cracked machine inlet hoses to keep them in good shape • clean the aerator to ensure smooth flow of water • reduce water noise in pipes tube clamp • replace dish washers, mend broken pipes and open clogged drains • replace old piping with the new ones as per industry practices • dispose wastewater from plumbing systems 		
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	<ul style="list-style-type: none"> • clean faucet aerators with weak water pressure • detect leaks under a sink or in a wall • fix running toilets to prevent the wastage of water <p>clean up spills quickly after the task has been completed</p>		
<p>Broad Learning Outcomes/Core Skill</p>	<p>Language to communicate written or oral, with required clarity</p> <ul style="list-style-type: none"> • report any difficulties or problems that may arise with the pipe fitting activities, and carry out any agreed actions • inform relevant authority in case any shortcoming or fault is observed • demonstrate the correct use of a fire extinguisher • demonstrate the artificial respiration and the CPR Process • demonstrate how to free a person from electrocution • demonstrate correct method to move injured people and others during an emergency • obtain complete information and instructions from the supervisor and fellow workers, getting clarification where required • pass information to authorized people who require it, accurately and within agreed timescale and confirm its receipt • give information to others clearly, at a pace and in a manner that helps them to understand • display appropriate communication etiquette while working • display active listening skills while interacting with others at work • use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism • demonstrate responsible and disciplined behavior at the workplace • identify team and individual goals and timelines and work to meet them • display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible • consult with and assist others to maximize effectiveness and efficiency in carrying out tasks • escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict 	<p>The Plumber - General should have good communication skills both written and oral. He/ She should be able to solve basic arithmetic and algebraic principles and should have better understanding of social political and natural environment.</p> <p>Refer to the evidences provided in the adjacent column. Hence it falls under Level 4.</p>	<p>4</p>

	<p>Skill to basic arithmetic and algebraic principles</p> <ul style="list-style-type: none"> • tally the count and quality of pipes, tubings, fittings and other accessories provided in the packing with the manufacturer’s list provided or order form • calculate quantity, dimensions and type of pipes, pipe fittings, devices and materials required from design drawings / specifications • measure and mark dimensions for fabrication on the pipes and fittings making allowances for spring-back, distortion and assembly • tally the count and quality of fixtures, parts, support material provided in the packing with the manufacturer’s list provided or order form <p>basic understanding of social political and natural environment.</p> <ul style="list-style-type: none"> • identify hazards at the work area and take measures to migrate the hazards or report the same to authorized personnel • clear the area of unnecessary items, debris and waste as per organizational norms • erect signage and barricades as required to ensure safety and security of work area, workers and visitors • plan and sequence tasks in agreement with others involved in or affected by the work, while adhering to time commitments • clear work area to a safe and tidy condition on completion of the assembly activities • clear the work area and disposed of, reuse or recycle left over materials according to legislation, regulations, codes of practice and job specification • prepare work area to support efficient installation of plumbing pipes • replace faulty/cracked machine inlet hoses to keep them in good shape • clean the aerator to ensure smooth flow of water • reduce water noise in pipes tube clamp • replace dish washers, mend broken pipes and open clogged drains • replace old piping with the new ones as per industry practices • dispose wastewater from plumbing systems 		
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	<ul style="list-style-type: none"> • clean faucet aerators with weak water pressure • detect leaks under a sink or in a wall • fix running toilets to prevent the wastage of water • clean up spills quickly after the task has been completed 		
<p>Responsibility</p>	<p>Responsibility for own work and learning.</p> <ul style="list-style-type: none"> • identify hazards at the work area and take measures to migrate the hazards or report the same to authorized personnel • clear the area of unnecessary items, debris and waste as per organizational norms • store and stack materials in a safe and secure manner while ensuring there is • no spillage or cross-contamination • erect signage and barricades as required to ensure safety and security of work area, workers and visitors • plan and sequence tasks in agreement with others involved in or affected by the work, while adhering to time commitments • check the completed pipe assembly to ensure that all operations have been completed, and that the finished assembly meets the required specification • check materials and equipment for compliance with standards, docket/order form and for acceptable condition • clear the work area and disposed of, reuse or recycle left over materials according to legislation, regulations, codes of practice and job specification • clean, check, maintain and store tools and equipment according to manufacturer recommendations and workplace procedures. • inform relevant authority in case any shortcoming or fault is observed • prepare work area to support efficient installation of plumbing pipes • prepare work area to support efficient installation of plumbing pipes • replace faulty/cracked machine inlet hoses to keep them in good shape 	<p>The Plumber - General should know to take responsibility of own work and learning.</p> <p>Refer to the evidences provided in the adjacent column. Hence it falls under Level 4.</p>	<p>4</p>

	<ul style="list-style-type: none"> • clean the aerator to ensure smooth flow of water • reduce water noise in pipes tube clamp • replace dish washers, mend broken pipes and open clogged drains • replace old piping with the new ones as per industry practices • dispose wastewater from plumbing systems • clean faucet aerators with weak water pressure • detect leaks under a sink or in a wall • fix running toilets to prevent the wastage of water • clean up spills quickly after the task has been completed • ensure that electrically driven power tools and machinery are grounded • handle and store various plumbing materials safely • ensure there are no tools left unattended on ledges, stepladders, on beams and near the edges of scaffolds • check the presence of hazardous materials at the work site and clear it as per industry approved guidelines 		
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Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S.No	Equipment Name	Minimum No.of Equipment required (per batch of 30 Candidates)	Unit Type	Mandatory Equipment
1	Heavy Weight Table (Wooden / Iron Framed) (To be Fixed on Ground) of size 4'4'x3'	2	Nos	Yes
2	Wooden Desk for material procurment (6'2'x3')	2	Nos	Yes
3	Bench Vice (Fixed on Table)	2	Nos	Yes

4	Pipe Vice (Fixed on Table)	2	Nos	Yes
5	Pipe Wrench - 8 "	2	Nos	Yes
6	Pipe Wrench - 10 "	2	Nos	Yes
7	Pipe Wrench - 12 "	2	Nos	Yes
8	Adjustable Spanner - 8"	2	Nos	Yes
9	Adjustable Spanner - 10"	2	Nos	Yes
10	Adjustable Spanner - 12"	2	Nos	Yes
11	Double Ended Spanner Set	2	Nos	Yes
12	Basin Wrench	2	Nos	Yes
13	Parrot Plier	2	Nos	Yes
14	Nose Plier	2	Nos	Yes
15	Cutting Plier	2	Nos	Yes
16	Screw Driver Set	2	Nos	Yes
17	Hammer	2	Nos	Yes
18	Meter Tape - 3m	2	Nos	Yes
19	Insulation Tape	2	Nos	Yes
20	Plastic Pipe Cutter	2	Nos	Yes
21	Tube Cutter	2	Nos	Yes
22	Hack Saw Frame	5	Nos	Yes
23	Hack Saw Blades	20	Nos	Yes
24	Torch Light	2	Nos	Yes
25	Drill Machine	2	Nos	Yes
26	Drill Bit Set	2	Nos	Yes
27	Screw Set (Star)	2	Nos	Yes
28	Rawl Plug Set	2	Nos	Yes
29	Nails Set	200	Nos	Yes
30	Tester	4	Nos	Yes
31	Allen Key Set	2	Nos	Yes
32	Flat File with Handle	4	Nos	Yes

33	PPR Fusion Machine	1	Nos	No
34	Pipe Reamer	4	Nos	Yes
35	Teflon Tape	20	Nos	Yes
36	Thread Bundle	4	Nos	Yes
37	Water Level Tube	2	Nos	Yes
38	Spirit Level-12 inch	4	Nos	Yes
39	Plumb Bob	4	Nos	Yes
40	Tri Square	4	Nos	Yes
41	Stainless Steel Scale - 1 ft	4	Nos	Yes
42	Trowel	2	Nos	Yes
43	Shovel	2	Nos	Yes
44	Chisel	4	Nos	Yes
45	Centre Punch	4	Nos	Yes
46	Knife	4	Nos	Yes
47	Plunger	4	Nos	Yes
48	GI Pipe Ratchet Die Set	2	Nos	Yes
49	Scotch Bite	4	Nos	Yes
50	Safety Shoe (In Pairs)	4	Nos	Yes
51	Safety Belt	4	Nos	Yes
52	Safety Glass	4	Nos	Yes
53	Safety Gloves (Rubber) (In Pairs)	4	Nos	Yes
54	Safety Gloves (Cotton and Anti Cut) (In Pairs)	4	Nos	Yes
55	Safety Gloves (Heat Resistant) (In Pairs)	4	Nos	Yes
56	Ear Plug	4	Nos	Yes
57	Helmet	4	Nos	Yes
58	Ball Valve (1/2 inch)	4	Nos	Yes
59	Ball Valve (3/4 inch)	4	Nos	Yes

60	Ball Valve (1 inch)	4	Nos	Yes
61	Gate Valve	2	Nos	Yes
62	CPVC Pipes (3/4 inch)	12	Meter	Yes
63	CPVC Pipes (1 inch)	12	Meter	Yes
64	CPVC Tee (3/4 Inch)	10	Nos	Yes
65	CPVC Tee (1 Inch)	10	Nos	Yes
66	CPVC Elbow (3/4 Inch)	10	Nos	Yes
67	CPVC Elbow (1 Inch)	10	Nos	Yes
68	CPVC Male Threaded Adapter (3/4 Inch)	10	Nos	Yes
69	CPVC Male Threaded Adapter (1 Inch)	10	Nos	Yes
70	CPVC Female Threaded Adapter (3/4 Inch)	10	Nos	Yes
71	CPVC Female Threaded Adapter (1 Inch)	10	Nos	Yes
72	CPVC Coupler (3/4 Inch)	10	Nos	Yes
73	CPVC Coupler (1 Inch)	10	Nos	Yes
74	CPVC Union (3/4 Inch)	10	Nos	Yes
75	CPVC Union (1 Inch)	10	Nos	Yes
76	CPVC Female Threaded Elbow (3/4 Inch)	10	Nos	Yes
77	CPVC Female Threaded Elbow (1 Inch)	10	Nos	Yes
78	CPVC Reducer (1 inch to 3/4 Inch)	10	Nos	Yes
79	CPVC End Cap (3/4 inch)	10	Nos	Yes
80	CPVC End Cap (1/2 inch)	10	Nos	Yes
81	CPVC Solvent Cement-237 ml	2	Nos	Yes
82	GI Pipes (3/4 inch)	12	Meter	Yes
83	GI Pipes (1/2 inch)	12	Meter	Yes
84	GI Tee (3/4 Inch)	10	Nos	Yes
85	GI Tee (1/2 Inch)	10	Nos	Yes
86	GI Elbow (3/4 Inch)	10	Nos	Yes

87	GI Elbow (1/2 Inch)	10	Nos	Yes
88	GI Male Threaded Adapter (3/4 Inch)	10	Nos	Yes
89	GI Male Threaded Adapter (1/2 Inch)	10	Nos	Yes
90	GI Female Threaded Adapter (3/4 Inch)	10	Nos	Yes
91	GI Female Threaded Adapter (1/2 Inch)	10	Nos	Yes
92	GI Coupler (3/4 Inch)	10	Nos	Yes
93	GI Coupler (1/2 Inch)	10	Nos	Yes
94	GI Union (3/4 Inch)	10	Nos	Yes
95	GI Union (1/2 Inch)	10	Nos	Yes
96	GI Hex Nipple (3/4 inch)	10	Nos	Yes
97	GI Hex Nipple (1/2 inch)	10	Nos	Yes
98	GI Reducer (3/4 Inch to 1/2 Inch)	10	Nos	Yes
99	GI End Cap (3/4 inch)	10	Nos	Yes
100	GI End Cap (1/2 inch)	10	Nos	Yes
101	PPR Pipes (3/4 inch)	12	Meter	No
102	PPR Tee (3/4 Inch)	10	Nos	No
103	PPR Elbow (3/4 Inch)	10	Nos	No
104	PPR Male Threaded Adapter (3/4 Inch)	10	Nos	No
105	PPR Female Threaded Adapter (3/4 Inch)	10	Nos	No
106	PPR Coupler (3/4 Inch)	10	Nos	No
107	PPR Union (3/4 Inch)	10	Nos	No
108	PPR End Cap (3/4 inch)	10	Nos	No
109	PPR Female Threaded Elbow (3/4 Inch)	10	Nos	No
110	Composite Pipe (3/4 inch)	24	Meter	No
111	Composite Tee (3/4 Inch) - Pushfit	10	Nos	No
112	Composite Elbow (3/4 Inch) - Pushfit	10	Nos	No
113	Composite Male Threaded Adapter (3/4 Inch) - Pushfit	10	Nos	No

114	Composite Female Threaded Adapter (3/4 Inch) - Pushfit	10	Nos	No
115	Composite Female Threaded Elbow (3/4 inch)- Pushfit	10	Nos	No
116	SWR Pipe-110 mm	12	Nos	Yes
117	SWR Pipe-75 mm	12	Nos	Yes
118	SWR Pipe-50 mm or 40 mm	12	Nos	Yes
119	SWR Sweep Tee (110 mm * 110 mm * 110 mm)	4	Nos	Yes
120	SWR Sweep Tee (75 mm * 75 mm * 75 mm)	4	Nos	Yes
121	SWR Tee (50 mm* 50 mm* 50 mm OR 40 mm* 40 mm* 40 mm)	4	Nos	Yes
122	SWR Y- Joint (110 mm * 110 mm * 110 mm)	4	Nos	Yes
123	SWR Y- Joint (75 mm * 75 mm * 75 mm)	4	Nos	Yes
124	SWR Y- Joint (50 mm* 50 mm* 50 mm OR 40 mm* 40 mm* 40 mm)	4	Nos	Yes
125	SWR Reducer Joint (110 mm-75 mm)	4	Nos	Yes
126	SWR Reducer Joint (75 mm - 50 mm OR 40 mm)	4	Nos	Yes
127	SWR Reducer Joint (110 mm-50 mm OR 40 mm)	4	Nos	Yes
128	SWR Elbow (89.5 degree) -110 mm	4	Nos	Yes
129	SWR Elbow (89.5 degree) -75 mm	4	Nos	Yes
130	SWR Elbow (89.5 degree) -50 mm OR 40 mm	4	Nos	Yes
131	SWR Vent Cowl -110 mm	4	Nos	Yes
132	SWR Vent Cowl -75 mm	4	Nos	Yes
133	SWR Vent Cowl -50 mm OR 40 mm	4	Nos	Yes
134	UPVC Solvent Cement-100 ml	2	Nos	Yes
135	HDPE / PE (Pushfit only) Pipe-110 mm	12	Meter	Yes
136	HDPE / PE (Pushfit only) Pipe-75 mm	12	Meter	Yes
137	HDPE / PE (Pushfit only) Pipe-50 mm or 40 mm	12	Meter	Yes
138	HDPE / PE (Pushfit only) Sweep Tee (110 mm * 110 mm * 110 mm)	4	Nos	Yes
139	HDPE / PE (Pushfit only) Sweep Tee (75 mm * 75 mm * 75 mm)	4	Nos	Yes

140	HDPE / PE (Pushfit only) Tee (50 mm* 50 mm* 50 mm OR 40 mm* 40 mm* 40 mm)	4	Nos	Yes
141	HDPE / PE (Pushfit only) Y- Joint (110 mm * 110 mm * 110 mm)	4	Nos	Yes
142	HDPE / PE (Pushfit only) Y- Joint (75 mm * 75 mm * 75 mm)	4	Nos	Yes
143	HDPE / PE (Pushfit only) Y- Joint (50 mm* 50 mm* 50 mm OR 40 mm* 40 mm* 40 mm)	4	Nos	Yes
144	HDPE / PE (Pushfit only) Reducer Joint (110 mm-75 mm)	4	Nos	Yes
145	HDPE / PE (Pushfit only) Reducer Joint (75 mm - 50 mm OR 40 mm)	4	Nos	Yes
146	HDPE / PE (Pushfit only) Reducer Joint (110 mm-50 mm OR 40 mm)	4	Nos	Yes
147	HDPE / PE (Pushfit only) Elbow (89.5 degree) -110 mm	4	Nos	Yes
148	HDPE / PE (Pushfit only) Elbow (89.5 degree) -75 mm	4	Nos	Yes
149	HDPE / PE (Pushfit only) Elbow (89.5 degree) -50 mm OR 40 mm	4	Nos	Yes
150	HDPE / PE (Pushfit only) Vent Cowl -110 mm	4	Nos	Yes
151	HDPE / PE (Pushfit only) Vent Cowl -75 mm	4	Nos	Yes
152	HDPE / PE (Pushfit only) Vent Cowl -50 mm OR 40 mm	4	Nos	Yes
153	Rubber Lubricant	2	Nos	Yes
154	Wash Basin (Wall Hung)	1	Nos	Yes
155	Pedestal Wash Basin	1	Nos	Yes
156	Waste Coupling	1	Nos	Yes
157	Indian WC (Water Closet)	1	Nos	Yes
158	European WC (Floor Mounted) with Seat Cover	1	Nos	Yes
159	European WC (Wall Mounted) with Seat Cover	1	Nos	Yes
160	Kitchen Sink	1	Nos	Yes
161	Urinal	1	Nos	Yes
162	Hose Pipe-Plastic	5	Nos	Yes
163	Connection Pipe	5	Nos	Yes
164	Angle Cock (Single End)	2	Nos	Yes
165	Angle Cock (Double End)	2	Nos	Yes

166	Bib Cock	2	Nos	Yes
167	Basin Mixer	1	Nos	Yes
168	Over Head Shower	1	Nos	Yes
169	Wall Mixer (2 in 1)	1	Nos	Yes
170	Wall Mixer (3 in 1) (with Hand Shower Arrangement)	1	Nos	Yes
171	Health Faucet	1	Nos	
172	Bottle Trap	1	Nos	Yes
173	P Trap for Wash Basin	1	Nos	Yes
174	P Trap for WC	1	Nos	Yes
175	Multi Floor Trap	1	Nos	Yes
176	Cistern	1	Nos	Yes
177	Jali for Drainage	1	Nos	Yes
178	White Pooty	1	Nos	Yes
179	Notepad	30	Nos	Yes
180	Pen	30	Nos	Yes
181	Pencil	30	Nos	Yes
182	Eraser	30	Nos	Yes
183	Sharpener	30	Nos	Yes
184	White Board / Black Board	2	Nos	Yes
185	White Board Marker / Chalk (Blue)	2	Nos	Yes
186	White Board Marker / Chalk (Black)	2	Nos	Yes
187	White Board Marker / Chalk (Red)	2	Nos	Yes
188	Black Board Chalk (White)	2	Nos	Yes
189	White Board / Black Board Duster	1	Nos	Yes
190	Cotton Clothes	1	Meter	Yes
191	Utility Knife	10	Nos	Yes
192	Insulation Cutting Tools	5	Nos	Yes

193	Pipe Insulation (Foam, Fiberglass, etc.)	3 ft	Nos	Yes
194	Adhesives (Spray Adhesive, Contact Cement)	5	Nos	Yes
195	Foil Tape	10	Nos	Yes
196	Heat Gun	5	Nos	Yes
197	Insulation Sleeves	3 Meter	Nos	Yes
198	Scissors	5	Nos	Yes
199	Bending Tool (for flexible insulation)	5	Nos	Yes
200	Socket Set	5	Nos	Yes
201	Pry Bar (to adjust existing structures)	2	Nos	Yes
202	Insulation Fasteners (plastic or metal)	30	Nos	Yes
203	Caulking Gun (for sealants)	5	Nos	
204	Insulation Blankets (for larger pipes)	1	Nos	
205	Duct Tape	10	Nos	
206	Insulation Cutters (for rigid foam)	5	Nos	Yes
207	Jigsaw (for custom shapes)	5	Nos	Yes
208	Square (to ensure accurate cuts)	5	Nos	Yes
209	Safety Harness (if working at heights)	5	Nos	Yes
210	Vise Grip Pliers	5	Nos	Yes
211	Measuring Wheel (for longer distances)	5	Nos	Yes
212	Trowel (for applying adhesive)	5	Nos	Yes
213	Wire Brush (for cleaning pipes)	5	Nos	Yes
214	Thermal Imaging Camera (to detect leaks)	1	Nos	Yes
215	Tape Measure with Laser (for precision)	2	Nos	Yes
216	Heavy-Duty Shears (for thick insulation)	2	Nos	Yes
217	Heat Shrink Tubing (for small areas)	2 Meter	Nos	Yes
218	Insulation Removal Tools (if retrofitting)	2	Nos	Yes
219	Plastic Sheeting (for moisture barriers)	1	Nos	Yes

220	Crimping Tool (for certain insulation applications)	5	Nos	Yes
221	Strapping Tool (for securing insulation)	2	Nos	Yes
222	Lifting Straps (for heavy insulation rolls)	1	Nos	Yes
223	Pipe Cutter (if replacing pipes)	5	Nos	Yes
224	Riveter (for fastening certain types of insulation)	2	Nos	Yes
225	Pipe Thawing Equipment* (if working with frozen pipes)	1	Nos	Yes

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. White Board / Black Board / Smart Board
2. Marker
3. Projector
- 4.

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Kromatics	Rohit R korgaonkar	Partner	709, Tropical new Era Business Park, Thane	9820426977	rohithkorgaonkar@gmail.com	NA

2	Raja Electrical Service	K Dhandapani	Manager - Plumbing	1007, Avinashi Road, Coimbatore	9944914632	dhandapani_raja@gmail.com	NA
3	Jadhavpur University	Dr Subhasish Das	Associate Professor	Kolkata	8240493196	subhasish.das@jadavpuruniversity.in	NA
4	Technipenergies India Limited	N Gopalakrishnan	JGN, Head of civil design	Okla Phase 1, New Delhi	9840310327	gopalakrishnan.nityanandan@ten.in	NA
5	D'Plumbing Consultants	Chintan Daiya	Director/Partner	St. Ramdas Marg, Mulund East, Mumbai	9323990264	chintan@dplumbing.net	NA
6	Sanitary Syndicate Private Limited	Sandipkar ray choudhary	Director	Halder Road, Kolkata	9748704571	sandip@sspik.com	NA
7	Prestige Estate Project Limited	Sreenivasan J	Deputy Manager	Prestige Falcon Tower, Brnton Road, Bengaluru	9148780627	sreenivasan.j@prestigeconstructions.com	NA
8	Binay Udyog Pvt Ltd	Nikhil Agarwal	Director	20 A Sura lane 3, Kolkata	9830062300	na@hepcoidia.com	NA

9	Ashiana Foundation	B C Asthana	GM - Skill Training and development	Saket District Center, Saket, New delhi	9828023719	bc.astana@asianahousing.com	NA
10	Bathline India Pvt Ltd	Pradeep Kumar Jain	CEO	A - 232 Okhla Phase 1, New Delhi	9953060576	ceo@bathlineindia.com	NA
11	Amara Raje Infra Pvt Ltd	A.Hari Mohan Reddy	Sr. Manager	Terminal A, 1-18/1/AMR/NR Nanakramguda, Hyderabad	8056771236	hmr@amaraja.com	NA
12	Godrej & Boyce Mfg. Co. Ltd	Sanjeev Kumar Chawla	Sr. Manager	Plto no - A-40, Phase 8-A, Industrial Area, Mohali 160059	9888412599	sanjeevc@godrej.com	NA
13	Hracers Associates LLP	Sunil Raina	GM Manager		9717890345	sunil.rauna@hracers.com	NA
14	Labournet Services India Pvt Ltd	Prashant Pitke	Head Apprenticeship	Marenahallipalya , JP Nagar, Phase 2 Banglore	9860342349	prashant.pitke@sahi.ai	NA

15	PVR Innovations LLP	Narasimhan Rohit	Partner	C-1/1232, Vasant Kunj, New Delhi	9821541146	rohitn@mytat.co	NA
16	Distil Ventures india Limited	Arjun Mishra	Director	216 - Dlf Tower B, Jasola, New Delhi		Arjun@distil.grou.com	NA
17	Deepanjali Sanitations	Amit Kumar Dash	Propertier	27-B, 1st Floor, DDA Flats, Shahpur Jat, New Delhi	965469594 5	amitkdash96@gmail.com	NA
18	Reliable plumbing Solutions	Surya Kumar Yadav	Project manager	22, anand vihar, near gagan cinema, indore, MP	9901212237		NA
19	Nina Percept Pvt Ltd	Bikram Kumar	Sr. Engineer - Project Head	DLF Cyber Park, Gurugram	9870320490	bk3184@gmail.com	NA
20	Goodwill Plumbing Services	Rahul Pandey	Supervisor	Delatoli, near madan Dhaba, Kokar, Ranchi	9665596519	goowillplumbingservices@gmail.com	NA

21	RAK Ceramics India Pvt Ltd	Sai Ram	Manager 0	P.Bno.11, dapeddapuram, adbroad, samalkot, AP	8655954158	officemail.ind@rakceramics.com	NA
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Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2024 – 25	20000	20000	2000	2000	100	100
2025 – 26	30000	30000	3000	3000	100	100
2026 – 27	30000	30000	3000	3000	100	100

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
Version 4.0	2021 - 2024	101730	85921	75341	45204	12207	10310	9040	5424	nil	nil	Nil	nil

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1. PMKVY (RPL, STT and SP)
2. DAY-NULM
3. NIPUN

4. SANKALP
5. DDUGKY
6. SEEKHO AUR KAMAO
7. INDUSTRY FUNDED RPLs
8. JAL JEEVAN MISSION
9. Various State Government Schemes
10. Other Central Government Schemes

Content availability for previous versions of qualifications:

Participant Handbook Facilitator Guide Digital Content Qualification Handbook Any Other:

Languages in which Content is available: Hindi, English

[Annexure: Detailed Assessment Criteria](#)

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PSC/N0130: Prepare for Plumbing Installations and Maintenance	<i>Identify different tools, equipment and fittings</i>	5	8	-	-
	PC1. Explain in detail the use of different tools, measuring & inspection device equipment, and fittings for plumbing.	-	-	-	-
	PC2. Perform cutting deburring/filing, marking, and fixing operations using vice.	-	-	-	-
	PC3. Assess the tool's material quality to ensure long-term use in demanding plumbing environments.	-	-	-	-
	PC4. Check if the tool & fitting required for different pipe types and plumbing applications.	-	-	-	-
	PC5. Ensure that the tool includes necessary safety features to prevent injuries during use.	-	-	-	-
	<i>Read and interpret the plumbing drawing</i>	5	10		1
	PC6. Ensure that the pipes are installed correctly, with minimal short turns, correct distances, and optimal use of space.	-	-	-	-
	PC7. Verify that hot and cold-water lines are correctly laid and insulated where necessary to prevent heat loss.	-	-	-	-
	PC8. Interpret the position of the fixtures and their accessories for supply and drainage systems	-	-	-	-

	PC9. Understand hot & cold-water piping lay out in the building.	-	-	-	-
	PC10. Ensure correct pipe -size/dia / type are used to get the required pressure & flow rate for water supply system.	-	-	-	-
	PC11. Ensure correct usage pipe size & fitting the pipe with correct slope to install drainage system	-	-	-	-
	PC12. Ensure that all plumbing fixtures (sinks, toilets, showers) are positioned according to the architectural plan, with proper spacing for usability and maintenance.	-	-	-	-
	PC13. Ensure that each fixture has clearly indicated connection points for water supply.	-	-	-	-
	PC14. Check the drainage system for proper venting, position of traps & anti siphonage to prevent breaking of water seals	-	-	-	-
	<i>Prepare for work</i>	5	10	2	-
	PC15. Collect required plumbing material -type, size, and quantities based on specifications from drawings and plans.	-	-	-	-
	PC16. Check if the tools and equipment are functioning properly and inform the relevant authority in case of any deviation.	-	-	-	-
	PC17. Clear the area of hazardous substances, debris, and waste as per organizational norms	-	-	-	-
	PC18. Store collected materials to be used in a secure manner to ensure there is no spillage or cross-contamination.	-	-	-	-
	PC19. place signages and barricades as required to ensure safety and security of the work area, workers, and visitors	-	-	-	-
	PC20. plan tasks in agreement with others while adhering to time commitments.	-	-	-	-
	Total Marks	15	30	-	5
PSC/N0131: Install Water Supply Systems	<i>Prepare for installation of water supply system</i>	2	4	-	-
	PC1. Study a typical water distribution system and identify its different components.	-	-	-	-
	PC2. Explain in detail the hot-water and cold-water distribution/circulation system.	-	-	-	-
	PC3. Inspect typical solar water heater system and demonstrate its different components with its applications.	-	-	-	-
	PC4. Identify & select the fitting requirements to install the pipes	-	-	-	-
	PC5. measure and mark dimensions for installation of the pipes and fittings base on site condition making allowances for finale finishing	-	-	-	-
	<i>Cut, prepare, and assemble various types of pipes</i>	5	10		2

	PC6. Cut various types of pipes to the required length.	-	-	-	-
	PC7. Cut threads on G I pipe as required.	-	-	-	-
	PC8. Bend and form the pipes to specified angles and offsets.	-	-	-	-
	PC9. prepare pipe ends using techniques such as reaming, deburring, levelling, filing, and grinding	-	-	-	-
	PC10. Join different types of pipes using fittings and with specified techniques.	-	-	-	-
	PC11. Ensure the assembled pipe meets the required specifications	-	-	-	-
	PC12. Report any issues/ difficulties that may arise.	-	-	-	-
	<i>Carry out the corrective actions</i>	5	10	-	3
	PC13. Install the assembled pipe fittings and other water supply components	-	-	-	-
	PC14. identify the area and route where the assembled pipes are to be installed	-	-	-	-
	PC15. perform wall chasing, drilling, and nailing on a range of building materials such as brickwork, concrete, block work, timber, etc.	-	-	-	-
	PC16. install pipes and other water supply components according to given specifications and site requirements without damage or interference to the surrounding structures	-	-	-	-
	PC17. finish the cut area of the wall after installing pipes and other water supply components	-	-	-	-
	<i>post-installation activities</i>	3	6	-	-
	PC18. check if all the water supply system installations are properly aligned, sized, supported, and installed properly	-	-	-	-
	PC19. identify and rectify faults that are within limits of expertise and authority and escalate others to authorized personnel	-	-	-	-
	PC20. clear the work area and dispose, reuse, or recycle leftover materials according to regulations and, codes of practice	-	-	-	-
	PC21. clean and store tools and equipment according to manufacturer's recommendations and workplace procedures	-	-	-	-
	Total Marks	15	30	-	5
PSC/N0132: Install Drainage Systems	<i>Prepare for installation of drainage systems</i>	4	8	-	-
	PC1. identify the type of drainage piping systems and its components to be installed as appropriate for the type of building	-	-	-	-
	PC2. use plumbing project plans to determine the location of various drainage components and the route of the water drainage piping and traps	-	-	-	-

	PC3. calculate quantity, dimensions and type of materials required from design drawings/specifications	-	-	-	-
	PC4. construct chambers to accommodate drainage systems	-	-	-	-
	PC5. determine fitting requirements for installing various types of drainage pipes according to given specifications and site requirements	-	-	-	-
	PC6. check if the area is prepared for laying the pipes for underground, above ground and overhead piping systems	-	-	-	-
	<i>Perform installation of drainage systems</i>	7	14	-	5
	PC7. install the various components of drainage system such as various pipes and their fittings, manholes, traps, cleanouts, catch basins, inspection chamber, soak pit etc.	-	-	-	-
	PC8. perform fitting activities on various types of pipes such as stoneware (SW) pipes, polyvinyl chloride (PVC) pipes etc.	-	-	-	-
	PC9. install stormwater and sub-soil drainage system	-	-	-	-
	PC10. install different types of pumps used in sanitary and drainage systems such as submersible water pumps, dewatering pumps (for rainwater piping) etc.	-	-	-	-
	PC11. install pipework for water and sewage treatment plant	-	-	-	-
	<i>Post-installation activities</i>	4	8	-	-
	PC12. test the installations for proper functioning PC13. repair faulty drainage pipes and traps	-	-	-	-
	PC14. ensure that all inspection openings and covers are fitted according to relevant standards and job specifications	-	-	-	-
	PC15. backfill excavated areas to secure the installation	-	-	-	-
	PC16. put required signages at the site after the plumbing task has been completed	-	-	-	-
	PC17. clear the work area and dispose, reuse or recycle left over materials according to legislation, regulations, codes of practice and job specification	-	-	-	-
	PC18. clean and store tools and equipment according to manufacturer’s recommendations and workplace procedures	-	-	-	-
	Total Marks	15	30	-	5
PSC/N0133: Install Plumbing Fixtures	<i>Prepare for installation of fixtures</i>	4	8	-	-
	PC1. Plan the correct fixtures requirement, parts, and support material provided in the packing with the manufacturer’s list or order form.	-	-	-	-

	PC2. select the size, type, and quantity of fixture and trim for specific applications according to the given specifications	-	-	-	-
	PC3. locate and mark the position of fixtures and fixture supports in structures	-	-	-	-
	PC4. Ensure fixtures are level and securely fastened. Tighten connections without over-tightening, which can damage the fittings.	-	-	-	-
	<i>Install sanitary fixtures, support, and related accessories</i>	7	14	-	5
	PC5. cut the physical structures such as walls, and concrete in line with the correct markings and specifications for performing internal pipe installations	-	-	-	-
	PC6. install supports for plumbing piping using correct tool to ensure grade, spacing, and alignment	-	-	-	-
	PC7. install fixtures as per specifications without damage to pipework, the surrounding area.	-	-	-	-
	PC8. Install and secure the sensor for touchless fittings and fixtures in the slot provided slot.	-	-	-	-
	PC9. insert batteries for sensor-based fittings and fixtures safely and in compliance with the manufacturer’s specifications	-	-	-	-
	PC10. connect fixture to water supply, drainage and electricity supply & ensuring proper functioning, safety and compliance to manufacturer’s specifications	-	-	-	-
	PC11. perform installation of smart plumbing fixtures.	-	-	-	-
	PC12. Perform Installation of smart sensors and automated systems to monitor and control water flow, temperature, and energy usage in real-time.	-	-	-	-
	<i>Perform post-Installation activities</i>	4	8		
	PC13. plumb and level the supports and fixtures installed to ensure alignment and balance	-	-	-	-
	PC14. check if all installations are properly aligned, supported and functioning	-	-	-	-
	PC15. identify and rectify/ replace faults that are within limits of expertise and authority and escalate others to authorized personnel	-	-	-	-
	PC16. clear the work area and dispose, reuse or recycle left over materials according to regulations and codes of practice	-	-	-	-
	PC17. Handover to customer with full information and warranty card of products.	-	-	-	-
	Total Marks	15	30	-	5
PSC/N0142: Perform Troubleshooting and Maintenance	<i>Identify faults in domestic plumbing systems and fixtures</i>	5	10	-	2
	PC1. Detect root cause for problem	-	-	-	-

for Domestic Plumbing Fixtures and Systems	PC2. detect blockages and damage in pipes, fitting and fixtures	-	-	-	-
	PC3. detect reason for low flow low pressure	-	-	-	-
	<i>Perform repair and maintenance activities</i>	5	10	-	2
	PC4. Replace faulty pipe fitting & parts	-	-	-	-
	PC5. remove air lock and blockages in the pipes that are installed	-	-	-	-
	PC6. repair and maintain water supply tanks and valves	-	-	-	-
	PC7. unclog drains and drain’s strainer baskets	-	-	-	-
	PC8. repair broken sewer, dripping faucets and fixtures that are not working properly	-	-	-	-
	PC9. resolve leakages, loosening and jamming of fittings	-	-	-	-
	PC10. implement measures to reduce noise in pipes and fixtures	-	-	-	-
	PC11. inspect and maintain the septic systems on a timely basis	-	-	-	-
	PC12. perform basic services for appliances such as water heaters, washing machines and dishwashers etc.	-	-	-	-
	<i>Post-maintenance activities</i>	2	4	-	-
	PC13. clean up spills quickly after the task has been completed	-	-	-	-
	PC14. empty waste containers as per organizational procedures	-	-	-	-
	PC15. discard oily rags and flammable materials as per industry practices	-	-	-	-
	PC16. record daily logs in a specified format for activities such as maintenance and installation	-	-	-	-
	PC17. guide customers on proper care and maintenance of plumbing systems	-	-	-	-
	<i>Adopt Green Plumbing Practices</i>	3	6	-	1
	PC18. Minimize water usage by using water-efficient fixtures and appliances.	-	-	-	-
	PC19. Apply water leak prevention techniques	-	-	-	-
	PC20. Use low toxicity and environment friendly materials	-	-	-	-
	PC21. Maintain optimal water pressure to prevent waste and damage to the system.	-	-	-	-
	PC22. Perform Insulation on pipes carrying hot water to minimize energy loss and improve efficiency.	-	-	-	-
PC23. Use locally sourced materials and prefabricated components to reduce transportation energy, and choose products with a lower carbon footprint.	-	-	-	-	
PC24. Ensure that the plumbing system complies with relevant green building standards like LEED (Leadership in Energy and Environmental Design) or Green Building Certification.	-	-	-	-	

Total Marks		15	30	-	5
PSC/N0136: Apply Health and Safety Practices at the Workplace	<i>Follow safety measures to avoid accidents</i>	12	32	-	5
	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 organizational 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	-	-	-	-
	<i>Follow hygiene and sanitation practices</i>	3	8	-	2
	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	-	-	-	-
	<i>Use tools, equipment and materials safely</i>	7	8	-	1
	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	-	-	-	-
	<i>Deal with emergencies</i>	8	12	-	2
	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	-	-	-	-
Total Marks	30	60	-	10	

DGT/VSQ/N0102: Employability Skills (60 Hours)	<i>Introduction to Employability Skills</i>	1	1	-	-
	PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
	<i>Constitutional values – Citizenship</i>	1	1	-	-
	PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
	<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
	PC3. explain 21st Century Skills such as Self- Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
	<i>Basic English Skills</i>	2	3	-	-
	PC4. speak with others using some basic English phrases or sentences	-	-	-	-
	<i>Communication Skills</i>	1	1	-	-
	PC5. follow good manners while communicating with others	-	-	-	-
	PC6. work with others in a team	-	-	-	-
	<i>Diversity & Inclusion</i>	1	1	-	-
	PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
	PC8. report any issues related to sexual harassment	-	-	-	-
	<i>Financial and Legal Literacy</i>	3	4	-	-
	PC9. use various financial products and services safely and securely	-	-	-	-
	PC10. calculate income, expenses, savings etc.	-	-	-	-
	PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	4	6	-	-	
PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-	
PC13. use internet and social media platforms securely and safely	-	-	-	-	
<i>Entrepreneurship</i>	3	5	-	-	
PC14. identify and assess opportunities for potential business	-	-	-	-	
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-	
<i>Customer Service</i>	2	2	-	-	
PC16. identify different types of customers	-	-	-	-	
PC17. identify customer needs and address them appropriately	-	-	-	-	
PC18. follow appropriate hygiene and grooming standards	-	-	-	-	

	<i>Getting ready for apprenticeship & Jobs</i>	1	3	-	-
	PC19. create a basic biodata	-	-	-	-
	PC20. search for suitable jobs and apply	-	-	-	-
	PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
	Total Marks	20	30	-	-
PSC/N0183: Perform Installation of Insulation on Pipes	<i>Identify the materials</i>	2	4	-	-
	PC1. Identify different types of insulation materials like fibre glass, mineral wood, foam insulation, cellulose, etc.	-	-	-	-
	PC2. identify different types of covering for the protection of insulation material.	-	-	-	-
	PC3. identify different types of fasteners and joints.	-	-	-	-
	PC4. identify different types of sealings and jointing material.	-	-	-	-
	PC5. identify the accessories such as insulation hanger, insulation saddle, etc.	-	-	-	-
	PC6. identify the different types and grade of pipes	-	-	-	-
	PC7. identify the different types of measuring devices	-	-	-	-
	PC8. identify the different types of cutting and sealing devices.	-	-	-	-
	<i>perform measurement and cutting of insulation materials.</i>	3	6	-	2
	PC9. identify the irregularities in pipe diameter, shape, or surface condition and rectify it.	-	-	-	-
	PC10. ensure proper alignment and sealing of insulation joints.	-	-	-	-
	PC11. perform different techniques for cutting such as nesting or pattern cutting to maximize the number of usable pieces from each insulation sheet or roll.	-	-	-	-
	PC12. perform clean and smooth cutting of edges of insulation material to facilitate proper sealing and adhesion during installation.	-	-	-	-
	PC13. avoid ragged or jagged edges	-	-	-	-
	PC14. identify the correct measurement of material with required instruments.	-	-	-	-
	<i>Perform installation of insulation materials.</i>	8	16	-	3
	PC15. calculate the desired thickness of insulation material based on pipe diameter.	-	-	-	-
	PC16. perform checking of thermal conductivity, density and durability.	-	-	-	-
	PC17. perform tightly fit of insulation material around the pipes.	-	-	-	-
PC18. Ensure complete coverage of the pipe, including bends, joints, and fittings.	-	-	-	-	
PC19. perform secured sealing of seams, joints, and edges of insulation to prevent air leakage and moisture ingress.	-	-	-	-	

PC20. apply fastening methods such as adhesive bonding or mechanical fasteners correctly to ensure insulation stays in place.	-	-	-	-
PC21. check, insulation should not obstruct access to valves, controls, or other components of the piping system.	-	-	-	-
PC22. check for the properly installed insulation so that they should effectively reduce heat loss or gain, contributing to energy conservation goals.	-	-	-	-
PC23. Ensure compatibility of insulation material with the operating temperature and conditions of the piping system.	-	-	-	-
<i>health, safety and maintain records.</i>	2	4	-	-
PC24. adhere to safety protocols and regulations, including handling of insulation materials	-	-	-	-
PC25. perform the use of personal protective equipment (PPE).	-	-	-	-
PC26. Maintain records of insulation installation, including material specifications, measurements, and installation procedures.	-	-	-	-
Total Marks	15	30	-	5
Total Marks	140	270	-	40

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

1. Assessment System Overview:
 - Batches assigned to the assessment agencies for conducting the assessment on SIP or email
 - Assessment agencies send the assessment confirmation to VTP/TC looping SSC
 - Assessment agency deploys the ToA certified Assessor for executing the assessment
 - SSC monitors the assessment process & records
2. Testing Environment:
 - Check the Assessment location, date and time
 - If the batch size is more than 30, then there should be 2 Assessors.
 - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
3. Assessment Quality Assurance levels/Framework:
 - Question bank is created by the Subject Matter Experts (SME) are verified by the other SME

- Questions are mapped to the specified assessment criteria
 - Assessor must be ToA certified & trainer must be ToT Certified
4. Types of evidence or evidence-gathering protocol:
 - Time-stamped & geotagged reporting of the assessor from assessment location
 - Centre photographs with signboards and scheme specific branding
 5. Method of verification or validation:
 - Surprise visit to the assessment location
 6. Method for assessment documentation, archiving, and access
 - Hard copies of the documents are stored

On the Job:

1. Each module (which covers the job profile of Automotive Service Assistant Technician) will be assessed separately.
2. The candidate must score 60% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
 - Videos of Trainees during OJT
4. Assessment of each Module will ensure that the candidate is able to:
 - Effective engagement with the customers
 - Understand the working of various tools and equipment

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training
ES	Employability Skills

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above.