

A. FOR STT programs

Please refer [Guidelines for STT/LTT/Apprenticeship/OEM Qualification File](#)

QUALIFICATION FILE

<Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill)>

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	Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill)													
2.	Sector/s	Water Management and Plumbing													
3.	Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: NQR Code: QM-4-PL-00358-2023-V1-WMPS Version of Existing qualification:	Qualification Name of existing/previous version:												
4.	a. OEM Name b. Qualification Name (Wherever applicable)	Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill)													
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)		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	Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) would act as a one stop solution provider who gives various services to communities under the Jal Jeevan Mission scheme such as plumbing installation, maintenance, repair and operations of various plumbing related structures and systems. The person will also mobilize community members and organize for required resources across a specified geographic area with support from Village Water & Sanitation Committee, Gram Panchayat and government bodies. The person carries operations on basic masonry work along with basic electrical installation.													
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <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 (Civil Engineering)</td> <td></td> </tr> <tr> <td>3</td> <td>10th Class/I.T.I</td> <td>2 Years of experience Relevant</td> </tr> </tbody> </table>		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 (Civil Engineering)		3	10th Class/I.T.I	2 Years of experience Relevant
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3	10th Class/I.T.I	2 Years of experience Relevant													

		4	8th grade pass with 2 years of NTC	2 Years of experience Relevant																		
		5	Previous relevant Qualification of NSQF Level (3 as Assistant Plumber - General with minimum 8th Grade Pass)	3 Years of experience Relevant																		
		6	Previous relevant Qualification of NSQF Level (4 as Plumber - General with minimum 8th Grade Pass)	1 Year of experience Relevant																		
		b. Age: <20 Years >																				
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	15	11. Common Cost Norm Category (I/II/III) (wherever applicable): I																			
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																				
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<input checked="" type="checkbox"/> Offline <input checked="" type="checkbox"/> Online <input type="checkbox"/> Blended																				
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Classroom (offline)	150	270	90		510																	
Online																						
		(Refer Blended Learning Annexure for details)																				
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/7126.0101, NCO-2015/3132.0600, NCO-2015/8212.0402, NCO2015/7112.0201																				
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Jal Mitra, Plumbing Supervisor, Plant 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	<p>Encouraging the participation of women in Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) roles can be achieved through a variety of approaches. Here are some suggestions:</p> <p>Education and Training: Providing education and training opportunities to women in Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) roles can be a great way to encourage their participation in the field. This can be done through targeted programs that are designed to meet the specific needs of women in the field.</p> <p>Mentoring and Role Models: Encouraging and highlighting the achievements of women who are already working in Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) roles can serve as a great motivator for aspiring women. Additionally, providing mentorship opportunities to women can help them to build relationships with experienced professionals in the field, and gain valuable insights into the industry.</p> <p>Networking Opportunities: Creating opportunities for women to network with others in the industry can help to build a supportive community for women in Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) roles. This can be done through conferences, workshops, and other events that bring together professionals in the field.</p> <p>Flexible Work Arrangements: Providing flexible work arrangements can help to attract and retain women in Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) roles. This can include options such as part-time work, job-sharing, and flexible schedules.</p> <p>Addressing Bias and Stereotypes: Addressing bias and stereotypes can help to create a more inclusive and welcoming environment for women in Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) roles. This can be done through education and training programs, as well as through company policies and practices that promote diversity and inclusion.</p>
20.	Are Greening/ Environment Sustainability Aspects Covered <i>(Specify the NOS/Module which covers it)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (PSC/N0163, PSC/N0166)

21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Colleges <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
22.	Name and Contact Details of Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Water Management and Plumbing Skill Council Email: abhisek@wmpsc.in Contact No.: 7008580229 Website: www.wmpsc.in	
23.	Final Approval Date by NSQC:	24. Validity Duration: 3 years	25. Next Review Date:

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/ NSQF 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	Installation and Operations of Plumbing and Water Management Systems	PSC/N0163	Core	4	4	30	65	25		120	30	55		15	100	20
2	Carry out associated Basic Masonry and Manhole Construction Work	PSC/N0174	Core	4	4	25	75	20		120	30	50		20	100	15

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					Weightage (%) (if applicable)
						Th.	Pr.	OJT - Man	OJT - Rec.	Total	Th.	Pr.	Proj.	Viva	Total	
3	Perform Installation, Operation and Maintenance of Pumps and Related Machinery at Water Supply Stations and Water Treatment Units	PSC/N0166	Core	4	2	15	30	15		60	30	55		15	100	20
4	Perform basic installation of electrical fixtures and temporary LV connections	PSC/N0175	Core	4	4	25	75	20		120	30	50		20	100	15
5	Assist Village Water Sanitation Committees (VWSCs) to Conduct Water Quality Survey	PSC/N0149	Core	4	1.5	20	15	10		45	30	50		20	100	20
6	Apply health and safety practices at the workplace	PSC/N0136	Non-Core	4	0.5	05	10			15	30	60		10	100	5
7	Employability Skills (30 Hours)	DGT/VSQ/N0101	Non-Core	2	1	30				30	20	30			50	5
Duration (in Hours) / Total Marks					17	150	270	90		510	200	350		100	650	100

Elective 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.																
2.																
Duration (in Hours) / Total Marks																

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.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 60% (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)	<p>B.Tech in Civil / Mechanical Engineering with 2 years of Relevant Industry Experience and 1 year of Relevant Teaching Experience</p> <p>OR</p> <p>Diploma in Civil / Mechanical Engineering with 2 years of Relevant Industry Experience and 1 year of Relevant Teaching Experience</p> <p>OR</p> <p>Graduation (Science) with 2 Years of Plumbing / Environmental Engineering/ Water Management</p> <p>OR</p> <p>CITS Certified Trainer</p>
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	<p>M.Tech in Civil / Mechanical Engineering with 3 years of Relevant Industry Experience and 2 years of Relevant Teaching Experience</p> <p>OR</p> <p>B.Tech in Civil / Mechanical Engineering with 5 years of Relevant Industry Experience and 2 years of Relevant Teaching Experience</p>
3.	Tools and Equipment Required for Training	<p><input checked="" type="checkbox"/>Yes <input type="checkbox"/>No <i>(If "Yes", details to be provided in Annexure)</i></p>
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	<p>He/She has to undergo fresh Training of Trainers</p>

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	<p>B.Tech in Civil / Mechanical Engineering with 2 years of Relevant Industry Experience and 1 year of Relevant Teaching Experience</p> <p>OR</p> <p>Diploma in Civil / Mechanical Engineering with 2 years of Relevant Industry Experience and 1 year of Relevant Teaching Experience</p> <p>OR</p> <p>Graduation (Science) with 2 Years of Plumbing / Environmental Engineering/ Water Management</p>
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	<p>Diploma in Civil / Mechanical Engineering with 1 Year of Relevant Experience</p> <p>OR</p> <p>Graduation in Any Stream with 1 Year of Relevant Experience</p> <p>OR</p> <p>12th Grade Pass in any stream with 3 years of Relevant Experience</p>
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	<p>M.Tech in Civil / Mechanical Engineering with 3 years of Relevant Industry Experience and 2 years of Relevant Teaching Experience</p> <p>OR</p> <p>B.Tech in Civil / Mechanical Engineering with 5 years of Relevant Industry Experience and 2 years of Relevant Teaching Experience</p>

4.	Assessment Mode (<i>Specify the assessment mode</i>)	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 (<i>details to be provided in Annexure-if it is different for Assessment</i>)

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): Yes
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: As per Demand by Jal Shakti Mantralay
5.	Estimated nos. of persons to be trained and employed: 5,00,000
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes 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
Professional Theoretical Knowledge/Process	<p>Identify requirements</p> <ul style="list-style-type: none"> identify the objectives and considerations for the work from stakeholder’s inputs and studying the contractand drawings compile relevant information from the client briefing and technical inputs from concerned authorities 	Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) during the job works in familiar, predictable, routine, situation of clear choice.	4

	<ul style="list-style-type: none"> • survey the site to identify impact of local conditions on project strategy and design • prepare design basis report (DBR) for facilitating the project design • communicate the inputs obtained through site surveys to the designers and management for modifications • provide technical support to architects, design engineers and experts to strengthen the designs <p>Plan and schedule work activities</p> <ul style="list-style-type: none"> • extract relevant information from plumbing project design and specifications • plan a strategy for completion of plumbing project within the given budgets and constraints • prepare estimations, costing and budget reports for the project 		
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	<ul style="list-style-type: none"> • schedule various tasks to be performed for the plumbing project • share plan and schedule with the management team and obtain their approval <p>Ensure availability of required resources</p> <ul style="list-style-type: none"> • perform measurements and hydraulic calculations to identify the required equipment and materials for the plumbing project • estimate manpower requirements based on the work plan • determine adjustments required in timelines, costs and quantity of materials in line with the proposed design • identify potential suppliers for sourcing manpower, equipment and material at the work site • negotiate and agree a price with vendors • order for tools, equipment and supplies 		
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	<p>as required for the project</p> <ul style="list-style-type: none"> • facilitate contracting for manpower supply as per requirement • follow up with vendors for material delivery as per standard operating procedure (SOP) • ensure adequate stock of equipment and supplies in the stockroom • verify contractors' and suppliers' bills for manpower, equipment and materials <p>Initiate the project</p> <ul style="list-style-type: none"> • prepare the site for the project including setting boundaries and signage, clearing waste and hazards, leveling the area, etc. • organise for necessary facilities at project site such as water, electricity, toolrooms, washrooms, etc • prepare site diaries and work allocation sheets for the project undertaken 		
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	<ul style="list-style-type: none">• prepare detailed work plans for the execution team• allocate work and provide instructions to the team• handover all the project documents to the supervisor prior to starting the work• ensure that quality assurance/quality control (QA)/(QC) measures are implemented for various activities/items as per plan <p>Inspect the work progress</p> <ul style="list-style-type: none">• track the work under progress at various sites as per calculations, layouts and schematic mark-ups defined• record the status of work being performed at the worksite• check plans, drawings and quantities for accuracy of calculations relevant to the project• check whether the piping installations and fixtures are in		
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	<p>adherence to project drawing and specifications</p> <ul style="list-style-type: none">• ensure that the materials being used, and work performed is in accordance with the required specifications• check the material consumption to identify wastage• check if proper documentation for materials stocking and consumption is being maintained at the work site• compare the progress of work with the milestones defined in the project plan• check whether the tools, equipment and materials are stored as per manufacturer's instructions• inspect the quality of products that are being received at the work site• perform quality inspection, joint measurement and billing for running		
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	<p>account (RA) of an ongoing project</p> <ul style="list-style-type: none"> • inspect all the installed systems for proper functioning as per delivery standards • check that the scrap generated during work activities is disposed in a timely and industry prescribed manner • check if the workforce adheres to health and safety (HSE) norms at the work site • maintaining logs related to day-to-day execution and planning of work and resources • report work progress and requirements to the project managers, project engineers, contractors etc. <p>Take corrective action</p> <ul style="list-style-type: none"> • evaluate the reason of delay and discrepancies from plan • consult with team for possible remedies • provide suggestions for technical problems witnessed anytime during plumbing tasks 		
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	<ul style="list-style-type: none"> • modify work plan to incorporate corrective actions • provide instructions to team about the changes in plan <p>Liaise with stakeholders</p> <ul style="list-style-type: none"> • liaise with project consultants, subcontractors, supervisors, planners, quantity surveyors and general workforce for resolving routine problems • liaise with the procurement department to ensure that there are adequate resources present at the worksite • inform clients and their representatives about the work progress and deviations from plan and their reasons • liaise with the local authority to ensure compliance with local regulations and by-laws <p>Commission the project</p>		
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	<ul style="list-style-type: none">• test the installed systems for proper functioning• test the installed systems for leakages and/or damages• check the pressure and characteristic of water flow in just installed system• identify and rectify any anomalies which arise during commissioning exercise• coordinate with civil team, finishing team, mechanical electrical plumbing (MEP) design team, consultant, and contractor for the clearances• train owner's staff in equipment maintenance and systems operation• guide the plumbing team in conducting the handover exercise• prepare the handover documentation and project completion report		
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	<p>Follow safety measures to avoid accidents</p> <ul style="list-style-type: none">• identify risks and hazards at the workplace• wear personal protective equipment (PPE) as per the type of plumbing work• place protective barricades and signages around the pits and trenches• isolate the plumbing fittings and fixtures from electrical wiring to avoid accidents• adhere to organisational procedures for reporting hazards and incidents to relevant authorities• establish ventilation before entering underground work areas• work safely in and around trenches, elevated places and confined areas		
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	<ul style="list-style-type: none"> • ensure tools and hazardous materials are not left unattended • ensure good housekeeping in order to prevent hazards e.g. fire • dispose waste materials and used PPE according to regulations and codes of practice <p>Follow hygiene and sanitation practices</p> <ul style="list-style-type: none"> • follow recommended personal hygiene and sanitation practices, for example, washing/sanitizing hands, covering face with a bent elbow while coughing/sneezing etc. • clean and disinfect work area, materials/supplies, equipment etc. before and after use. • report hygiene and sanitation issues to appropriate authority <p>Use tools, equipment and materials safely</p>		
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	<ul style="list-style-type: none">• check that the tools, equipment and materials are in good condition and as per industry standards before use• use power tools and machinery that are grounded• replace or repair split or loose tools before use• store and transport various plumbing materials safely <p>Deal with emergencies</p> <ul style="list-style-type: none">• follow workplace emergency and evacuation procedures• use a fire extinguisher correctly• use safe methods to free a person from electrocution• administer appropriate first aid (such as CPR etc.) to victims in case of cuts, bleeding, burns, choking, electricshock, poisoning etc. <p>Ensure team preparedness for the tasks</p>		
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	<ul style="list-style-type: none"> • create a work plan and schedule for the workers as per work priorities, availability of manpower, equipment and weather conditions • assign work taking full account of each team member's abilities • train the workers <p>Monitor completion of work as per expected standards</p> <ul style="list-style-type: none"> • monitor project activities to ensure adherence to work instructions, schedules, budgets and targets • identify causes for any lag in performance as well as possible solutions to bridge the gap • provide feedback on individual work performance to each team member for improvement in work quality • implement measures to improve team effectiveness e.g. deadlines, regular 		
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	<p>breaks, standing meetings, proactiveness, minimum interruptions etc.</p> <ul style="list-style-type: none">• ensure accurate and effective delivery of written communication (reports, updates etc.) to stakeholders within agreed timelines <p>Handle queries, concerns and welfare of workers</p> <ul style="list-style-type: none">• investigate work-related complaints to verify problems and record responses relevant to the project• perform administrative duties, such as authorising leaves, processing time sheets as per standard operating procedure (SOP)• review contracts or work assignments to determine service, machine, or workforce requirements for jobs• deal with conflicts among the team		
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	<p>members in a professional manner</p> <ul style="list-style-type: none"> • prepare and maintain required records, such as work activity or personnel reports <p>Respect diversity</p> <ul style="list-style-type: none"> • use respectful verbal, non-verbal and written communication that is gender, disability, age and culturally sensitive • 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 • 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 		
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	<p>the same.</p> <p>Material and energy audit of workplace</p> <ul style="list-style-type: none"> • check for compliance with applicable environmental, waste management and disposal regulations • collect information about usage of different materials including water • collect information about pattern of electricity consumption and fuel consumption • prepare material and energy audit reports <p>Material conservation and use of environment friendly materials</p> <ul style="list-style-type: none"> • analyze material audit report to decipher excessive consumption of material and water • identify materials which can be replaced by environment friendly substitutes • identify processes where material 		
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	<p>utilization can be optimized</p> <ul style="list-style-type: none"> • plan the introduction of revised processes and environment friendly materials in a phased manner • plan and implement ways to conserve and re-use water • monitor material and water conservation processes <p>Energy/electricity conservation practices</p> <ul style="list-style-type: none"> • analyze energy/electricity audit report to identify high energy/electricity consumption areas • identify processes where energy/electricity utilization can be optimized • identify possibilities of using renewable energy and environment friendly fuels • plan the implementation of 		
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	<p>energy efficient systems in a phased manner</p> <ul style="list-style-type: none"> • ensure electrical equipment and appliances are switched off when not in use <p>Effective waste management/recycling practices</p> <ul style="list-style-type: none"> • identify recyclable, non-recyclable and hazardous waste • ensure recyclable, non-recyclable and hazardous waste are segregated as per SOP • ensure proper mechanism is followed while collecting and disposing recyclable and nonrecyclable waste • ensure proper mechanism is followed while collecting and disposing hazardous waste as per SOP • ensure reuse and recycling of waste wherever applicable • ensure proper mechanism is followed for treatment of wastewater in the unit 		
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<p>Professional and Technical Skills/ Expertise/ Professional Knowledge</p>	<ul style="list-style-type: none"> • standards, policies, and procedures followed in the company relevant to the role • organization’s departments and hierarchy • individual’s role in the workflow • workplace hazard reporting and hazard handling procedures • workplace safety requirements • standards applicable to the piping installation in plumbing • types and purpose of drawings, bluprints and plans associated with plumbing projects and relevant information available in them • information available in contractual documents and drawings and client briefings relevant to planning for plumbing projects 	<p>The Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) should possess the practical knowledge of his field.</p>	<p>4</p>

	<ul style="list-style-type: none"> • techniques to interpret project documents and technical inputs • Mechanical, Electrical and Plumbing (MEP) activities being performed for plumbing projects and their sequence • purpose and process of site survey for project strategy and design site survey checklist • purpose and key elements of design basis report (DBR) for facilitating the project design • project planning essentials • information in plumbing project design and specifications relevant to planning a project • various constraints that can impact the planning for a plumbing project • steps involved in preparing estimations, costing and budget reports • tools for planning and scheduling • importance of obtaining 		
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	<p>approval from authority before finalising plan</p> <ul style="list-style-type: none">• piping material specifications (PMS) used as per the plumbing design• various symbols, dimensions, terminology and key features of plans• techniques to evaluate the existing design of buildings• importance of drawing observations from project document• considerations for plumbing project design drawings and their approvals• factors that help to calculate the timelines, costs involved, and quantity of materials required• measurements and hydraulic calculations for resource planning for plumbing and fire protection systems• importance of accuracy in identification of measurements and calculations with		
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	<p>respect to plumbing work</p> <ul style="list-style-type: none"> • tools and equipment to be used for various tasks as per required specifications • different types of materials (CI/GI/PVC pipes, etc.), basic sanitary fittings (valves, clamps, elbows, etc.) and fixtures (showers, taps, basins, etc.) • optimal solutions for technical problems faced during plumbing tasks • importance of timely delivery of materials to the site • key considerations verify suppliers' and contractors' bills • how to estimate manpower requirements based on the work plan • procurement and contracting needs of project and site • how to identify potential suppliers and contractors • requisitioning process 		
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	<p>for ordering tools, equipment and supplies</p> <ul style="list-style-type: none"> • stockroom processes • importance of verify contractors' and suppliers' bills • purpose of work schedules, work plans, charts, work bulletins and memos and the work-related information that can be obtained from them • plumbing site preparation activities • plumbing site facilities • quality assurance/quality control (QA) (QC) measures at a plumbing site • QA QC duties as per Municipal Accounting Manual (MAM) • workplace safety requirements and the health and safety hazards at the workplace • organizational quality procedures, processes and delivery standards • risk and impact of not following defined 		
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	<p>procedures/work instructions</p> <ul style="list-style-type: none">• organizational process for performance evaluation• standards applicable to the piping installation in plumbing• types and purpose of drawings and plans associated with plumbing and their functions• tools, equipment and materials relative to drawings/specifications• techniques related to cutting, bending and joining of fittings and fixtures• key considerations to evaluate the blueprints as given by the design team• importance of accuracy in identification of measurements and calculations with respect to plumbing work• various symbols, dimensions, terminology and key features of plans		
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	<ul style="list-style-type: none">• how to check site plans, drawings and quantities for accuracy of calculations• key considerations to review the specifications of the materials• methods to analyse material consumption and ensure minimal wastage• various types of defects such as leakages, improper alignment, etc• various test used to check for proper installation and functioning of plumbing systems• common problems that cause delay and discrepancies in a plumbing project fulfilment and possible correctivemeasures and work arounds• process of documentation to be followed for the plumbing project• techniques to dispose the scrap generated during plumbing tasks		
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	<ul style="list-style-type: none">• storage procedure for materials and equipment relevant to the project• quality inspection process• joint measurement process• procedure to be followed to inspect buildings for plumbing requirements• the commissioning process• required pressure, flow and temperature of water at different outlets• typical issues or faults that can arise during commissioning exercise• methodology to rectify the issues that can arise during commissioning exercise• NEPA, NBC standards for plumbing• health and safety norms applicable at the workplace• possible causes of risk, hazard or accident in the workplace• organizational		
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	<p>procedures for upkeep of tools and plumbing materials, health and safety</p> <ul style="list-style-type: none"> • location of all the general health and safety equipment in the workplace • meaning of hazards and risks • 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. • work practices and precautions to control and prevent risks, hazards and accidents • importance of each personal protective equipment used such as eye protection mask, hard hats, gloves, apron, rubber boots etc. • tools and plumbing equipment as per latest industry standards • preventative and 		
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	<p>remedial actions to be taken in case of exposure to toxic materials</p> <ul style="list-style-type: none">• specific safety and health related problems faced in domestic, commercial and institutional setups• various causes of fire and precautionary activities to prevent the fire accident• techniques of using the different fire extinguishers• rescue techniques applied during a fire hazard• various types of safety signs and meaning• appropriate basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, minorburns, poisoning, eye injuries etc.• potential injuries and ill health associated with incorrect handling of tools and equipment• legislation, standards, policies, and procedures		
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	<p>followed in the company relevant to employment, behavior and performance conditions</p> <ul style="list-style-type: none"> • reporting structure, inter-dependent functions, lines and procedures in the work area • relevant people and their responsibilities within the work area • escalation matrix and procedures for reporting work and employment related issues • sexual harassment of women at workplace (Prevention, Prohibition and Redressal) Act, 2013 • organizational policy for harassment and discrimination based on gender, disability, caste, religion, color,sexual orientation or culture • internal and external stakeholders at the workplace and their communication requirements 		
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	<ul style="list-style-type: none">• importance of effective communication in the workplace and the impact of poor communication on the employee, the employer and the customer• various components of effective communication such as tone and pitch• advantages and disadvantages of various modes of communication• importance of teamwork in organizational and individual success• goal setting• group dynamics and processes• measures to improve workplace productivity\• importance of ethics and discipline for professional success• common reasons for interpersonal conflict• importance of developing effective working relationships for professional success		
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	<ul style="list-style-type: none">• how to deal with grievances and problems appropriately and effectively• importance and ways of managing interpersonal conflict effectively• laws, acts and provisions defined for PwD by the statutory bodies• government and private schemes and benefit available for PwD• basic gender concepts such as gender power relations, gender roles, access and control, gender sensitivity, gender equity and equality• gender, disability, cultural and age-related biases, stereotyping and its impact• actions and consequences of gendered behavior• types of harassment and discrimination based on gender, disability, caste, religion or culture that occurs at atypical workplace and how to		
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	<p>recognize it</p> <ul style="list-style-type: none"> • types of unacceptable behavior • legislative requirements and organizations procedures for waste management and disposal consumptions • renewable energy sources which can be deployed at the workplace • methods of optimum utilization of waste and best practices for waste disposal methods of treating wastewater and recycling of water 		
<p>Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill</p>	<ul style="list-style-type: none"> • read and write brief notes in local language/Hindi/English • read and write common, fire equipment, building construction and plumbing symbols • fill in relevant forms for material requisitioning, reporting, employment and other purposes • comprehend required quantities, names of materials, equipment 	<p>Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) should have practical skills which are routine and repetitive and should use quality concepts.</p>	<p>4</p>

	<p>and supplies and related forms and formats</p> <ul style="list-style-type: none">• provide verbal instructions and information about work related matters in local language or Hindi or English• state information, doubts and concerns about work related matters with clarity and in a professional manner• evaluate adequacy of information available for sound decision making• co-ordinate with a range of team members and activities• plan work activities and communicate to others whose work plans and timelines may be affected• identify the objectives, concerns and priorities of the client		
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	<ul style="list-style-type: none"> • identify array of solutions that addresses needs of the client • apply problem solving skills • seek official and authorized sources of help and guidance to resolve problems that cannot be solved at one's level of authority • diagnose the problem for root cause, identify the possible solution(s) and take up an optimum /best practical solution(s) • use logical thinking and make judgments • use reasoning skills and intuition to detect any potential problems which could arise 		
Broad Learning Outcomes/Core Skill	<ul style="list-style-type: none"> • read and write brief notes in local language/Hindi/English • read and write common, fire equipment, building 	Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) 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	4

	<p>construction and plumbing symbols</p> <ul style="list-style-type: none"> • write reports based on inspections done for fire systems in local language/Hindi/English • enter data into log books related to the work being performed • state information, doubts and concerns about work related matters with clarity and in a professional manner • evaluate adequacy of information available for sound decision making • identify the objectives, concerns and priorities of the client • identify array of solutions that addresses needs of the client • apply problem solving skills • seek official and authorized sources of help and guidance to resolve problems that 	<p>understanding of social political and natural environment.</p>	
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	<p>cannot be solved at one's level of authority</p> <ul style="list-style-type: none"> • diagnose the problem for root cause, identify the possible solution(s) and take up an optimum /best practical solution(s) • use logical thinking and make judgments • use reasoning skills and intuition to detect any potential problems which could arise • ensure timely completion of work as per agreed standards • think through the problem, evaluate the possible solution(s) and take up an optimum /best possible solution(s) 		
Responsibility	<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 	Jal Vitaran Sanchaalak (Water Distribution Operator) (Multi - Skill) should know to take responsibility of own work and learning.	4

	<p>the same to authorized personnel</p> <ul style="list-style-type: none">• 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		
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	<ul style="list-style-type: none">• 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		
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	<p>installation of plumbing pipes</p> <ul style="list-style-type: none">• 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• 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		
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	<ul style="list-style-type: none"> • 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.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Heavy Weight Table (Wooden / Iron Framed) (To be Fixed on Ground) of size 4'*4'*3'	Nos	2

2	Wooden Desk for material procurment (6'*2'*3')	Nos	2
3	Bench Vice (Fixed on Table)	Nos	2
4	Pipe Vice (Fixed on Table)	Nos	2
5	Pipe Wrench - 8 "	Nos	2
6	Pipe Wrench - 10 "	Nos	2
7	Pipe Wrench - 12 "	Nos	2
8	Adjustable Spanner - 8"	Nos	2
9	Adjustable Spanner - 10"	Nos	2
10	Adjustable Spanner - 12"	Nos	2
11	Double Ended Spanner Set	Nos	2
12	Basin Wrench	Nos	2
13	Parrot Plier	Nos	2
14	Nose Plier	Nos	2
15	Cutting Plier	Nos	2
16	Screw Driver Set	Nos	2
17	Hammer	Nos	2
18	Meter Tape - 3m	Nos	2
19	Insulation Tape	Nos	2
20	Plastic Pipe Cutter	Nos	2

21	Tube Cutter	Nos	2
22	Hack Saw Frame	Nos	5
23	Hack Saw Blades	Nos	20
24	Torch Light	Nos	2
25	Drill Machine	Nos	2
26	Drill Bit Set	Nos	2
27	Screw Set (Star)	Nos	2
28	Rawl Plug Set	Nos	2
29	Nails Set	Nos	200
30	Tester	Nos	4
31	Allen Key Set	Nos	2
32	Flat File with Handle	Nos	4
33	PPR Fusion Machine	Nos	1
34	Pipe Reamer	Nos	4
35	Teflon Tape	Nos	20
36	Thread Bundle	Nos	4
37	Water Level Tube	Nos	2
38	Spirit Level-12 inch	Nos	4
39	Plumb Bob	Nos	4

40	Tri Square	Nos	4
41	Stainless Steel Scale - 1 ft	Nos	4
42	Trowel	Nos	2
43	Shovel	Nos	2
44	Chisel	Nos	4
45	Centre Punch	Nos	4
46	Knife	Nos	4
47	Plunger	Nos	4
48	GI Pipe Ratchet Die Set	Nos	2
49	Scotch Bite	Nos	4
50	Safety Shoe (In Pairs)	Nos	4
51	Safety Belt	Nos	4
52	Safety Glass	Nos	4
53	Safety Gloves (Rubber) (In Pairs)	Nos	4
54	Safety Gloves (Cotton and Anti Cut) (In Pairs)	Nos	4
55	Safety Gloves (Heat Resistant) (In Pairs)	Nos	4
56	Ear Plug	Nos	4
57	Helmet	Nos	4
58	Ball Valve (1/2 inch)	Nos	4

59	Ball Valve (3/4 inch)	Nos	4
60	Ball Valve (1 inch)	Nos	4
61	Gate Valve	Nos	2
62	CPVC Pipes (3/4 inch)	Meter	12
63	CPVC Pipes (1 inch)	Meter	12
64	CPVC Tee (3/4 Inch)	Nos	10
65	CPVC Tee (1 Inch)	Nos	10
66	CPVC Elbow (3/4 Inch)	Nos	10
67	CPVC Elbow (1 Inch)	Nos	10
68	CPVC Male Threaded Adapter (3/4 Inch)	Nos	10
69	CPVC Male Threaded Adapter (1 Inch)	Nos	10
70	CPVC Female Threaded Adapter (3/4 Inch)	Nos	10
71	CPVC Female Threaded Adapter (1 Inch)	Nos	10
72	CPVC Coupler (3/4 Inch)	Nos	10
73	CPVC Coupler (1 Inch)	Nos	10
74	CPVC Union (3/4 Inch)	Nos	10
75	CPVC Union (1 Inch)	Nos	10
76	CPVC Female Threaded Elbow (3/4 Inch)	Nos	10

77	CPVC Female Threaded Elbow (1 Inch)	Nos	10
78	CPVC Reducer (1 inch to 3/4 Inch)	Nos	10
79	CPVC End Cap (3/4 inch)	Nos	10
80	CPVC End Cap (1/2 inch)	Nos	10
81	CPVC Solvent Cement-237 ml	Nos	2
82	GI Pipes (3/4 inch)	Meter	12
83	GI Pipes (1/2 inch)	Meter	12
84	GI Tee (3/4 Inch)	Nos	10
85	GI Tee (1/2 Inch)	Nos	10
86	GI Elbow (3/4 Inch)	Nos	10
87	GI Elbow (1/2 Inch)	Nos	10
88	GI Male Threaded Adapter (3/4 Inch)	Nos	10
89	GI Male Threaded Adapter (1/2 Inch)	Nos	10
90	GI Female Threaded Adapter (3/4 Inch)	Nos	10
91	GI Female Threaded Adapter (1/2 Inch)	Nos	10
92	GI Coupler (3/4 Inch)	Nos	10
93	GI Coupler (1/2 Inch)	Nos	10
94	GI Union (3/4 Inch)	Nos	10
95	GI Union (1/2 Inch)	Nos	10

96	GI Hex Nipple (3/4 inch)	Nos	10
97	GI Hex Nipple (1/2 inch)	Nos	10
98	GI Reducer (3/4 Inch to 1/2 Inch)	Nos	10
99	GI End Cap (3/4 inch)	Nos	10
100	GI End Cap (1/2 inch)	Nos	10
101	Composite Pipe (3/4 inch)	Meter	24
102	Composite Tee (3/4 Inch) - Pushfit	Nos	10
103	Composite Elbow (3/4 Inch) - Pushfit	Nos	10
104	Composite Male Threaded Adapter (3/4 Inch) - Pushfit	Nos	10
105	Composite Female Threaded Adapter (3/4 Inch) - Pushfit	Nos	10
106	Composite Female Threaded Elbow (3/4 inch)- Pushfit	Nos	10
107	SWR Pipe-110 mm	Nos	12
108	SWR Pipe-75 mm	Nos	12
109	SWR Pipe-50 mm or 40 mm	Nos	12
110	SWR Sweep Tee (110 mm * 110 mm * 110 mm)	Nos	4
111	SWR Sweep Tee (75 mm * 75 mm * 75 mm)	Nos	4
112	SWR Tee (50 mm* 50 mm* 50 mm OR 40 mm* 40 mm* 40 mm)	Nos	4
113	SWR Y- Joint (110 mm * 110 mm * 110 mm)	Nos	4

114	SWR Y- Joint (75 mm * 75 mm * 75 mm)	Nos	4
115	SWR Y- Joint (50 mm* 50 mm* 50 mm OR 40 mm* 40 mm* 40 mm)	Nos	4
116	SWR Reducer Joint (110 mm-75 mm)	Nos	4
117	SWR Reducer Joint (75 mm - 50 mm OR 40 mm)	Nos	4
118	SWR Reducer Joint (110 mm-50 mm OR 40 mm)	Nos	4
119	SWR Elbow (89.5 degree) -110 mm	Nos	4
120	SWR Elbow (89.5 degree) -75 mm	Nos	4
121	SWR Elbow (89.5 degree) -50 mm OR 40 mm	Nos	4
122	SWR Vent Cowl -110 mm	Nos	4
123	SWR Vent Cowl -75 mm	Nos	4
124	SWR Vent Cowl -50 mm OR 40 mm	Nos	4
125	UPVC Solvent Cement-100 ml	Nos	2
126	Connection Pipe	Nos	5
127	Angle Cock (Single End)	Nos	2
128	Angle Cock (Double End)	Nos	2
129	Bib Cock	Nos	2
130	Jali for Drainage	Nos	1
131	White Pooty	Nos	1
132	Notepad	Nos	30

133	Pen	Nos	30
134	Pencil	Nos	30
135	Eraser	Nos	30
136	Sharpener	Nos	30
137	White Board / Black Board	Nos	2
138	White Board Marker / Chalk (Blue)	Nos	2
139	White Board Marker / Chalk (Black)	Nos	2
140	White Board Marker / Chalk (Red)	Nos	2
141	Black Board Chalk (White)	Nos	2
142	White Board / Black Board Duster	Nos	1
143	Cotton Clothes	Meter	1
144	Monobloc Pump (0.5 HP)	Nos	1
145	Submersible Pump (1 HP)	Nos	1
146	Open Well Pump (1 HP)	Nos	1
147	Centrifugal 10 D Pump (1 HP)	Nos	1
148	Shallow Well Pump (1 HP)	Nos	1
149	Double ended flat spanner	Nos	2
150	Double ended ring spanner	Nos	2
151	Combination pliers	Nos	2

152	Side cutting pliers	Nos	2
153	Wire stripper	Nos	2
154	Electrician knife	Nos	2
155	Hand crimping tools	Nos	2
156	Cable cutter	Nos	2
157	Standard wire gauge	Nos	2
158	Vernier Calliper	Nos	2
159	Line Dori	Nos	2
160	PVC Mallet	Nos	2
161	Ball Pin Hammer	Nos	2
162	Fuse Puller	Nos	2
163	Reflective Jacket	Nos	2
164	Clamp Meter	Nos	2
165	Multi Meter (Digital)	Nos	2
166	Megger	Nos	2
167	Earth Tester	Nos	2
168	TDS Meter	Nos	2
169	Earthing Rod	Nos	2
170	Soldering Iron & Flux	Nos	2

171	Phase Sequence Meter	Nos	2
172	Pyranometer	Nos	2
173	Wire cutters	Nos	2
174	Wire strippers	Nos	2
175	Insulating paper and wooden/ insulating stick	Nos	5
176	First aid kit.	Nos	1
177	Impeller	Nos	2
178	Bearing	Nos	2
179	Control Panel and Components	Nos	2
180	Solar Collector	Nos	2
181	Insulated Tank	Nos	2
182	Solar Panels and Tubes	Nos	2
183	Wires as Per Manufacture Specifications	Ft	90

Classroom Aids

The aids required to conduct sessions in the classroom are:

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

Annexure: Industry Validations Summary

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

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2023-24	1,00,000	80,000	40,000	32,000	5,000	2,500
2024-25	2,00,000	1,60,000	80,000	64,000	10,000	5,000
2025-26	2,00,000	1,60,000	80,000	64,000	10,000	5,000

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
1.0													

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.
- 2.

Content availability for previous versions of qualifications:

Participant Handbook Facilitator Guide Digital Content Qualification Handbook Any Other:

Languages in which Content is available:

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilli ng.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	<input type="checkbox"/> Theory/ Lectures - Imparting theoretical and conceptual knowledge		
2	<input type="checkbox"/> Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners		
3	<input type="checkbox"/> Showing Practical Demonstrations to the learners		
4	<input type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
5	<input type="checkbox"/> Tutorials/ Assignments/ Drill/ Practice		
6	<input type="checkbox"/> Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	<input type="checkbox"/> On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training		

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/N0163	PC1. collect plumbing material as per type, size and requirement based on specifications from drawings and plans	1	3	-	1
	PC2. correct measurement and marking the dimensions for fabrication on the pipes and fittings making allowances for spring-back, distortion and assembly carefully.	1	3	-	1

PC3. cut various types of pipes to appropriate length	2	3	-	1
PC4. bend and form the pipes to specified angle and offsets	2	3	-	1
PC5. prepare pipe ends using techniques such asreaming, leveling, filing, grinding, etc.	1	3	-	1
PC6. joining of different type of pipes using fittings and relevant techniques	2	3	-	1
PC7. construct chambers to accommodate drainage systems as per drawings/specifications	1	3	-	1
PC8. locate various drainage components and its route as per plumbing project plans.	1	2	-	1
PC9. carry out installation of the various components of drainage system such as pipes and their fittings, manholes, traps, cleanouts, catch basins, inspection chamber, soak pit etc.	2	2	-	0.5
PC10. selection of type, size and quantity of fixture according to given specifications	2	2	-	0.5
PC11. cutting of physical structures such as walls, concrete in line with correct markings and specifications to perform internal pipe installations	2	2	-	0.5
PC12. install valves and traps as per plumbing project plan	2	2	-	0.5
PC13. install fixtures as per specifications without damaging fixtures, pipework and the surrounding conditions etc.	2	2	-	0.5
PC14. install and secure the sensors for touchless fittings and fixtures in the provided slot and insert batteries for sensor-based fittings and fixtures safely	2	2	-	0.5
PC15. clear the area from hazardous substances, debris and waste as per organizational norms and plan tasks in agreement with others while adhering to time commitments	1	3	-	0.5
PC16. make sure that all inspection openings and covers are being fitted according to relevant standards and job specifications	1	3	-	0.5
PC17. test the installations for proper functioning	1	2	-	1
PC18. check and rectify faults that are within limits of expertise and escalate higher authorities to rectify it	1	3	-	0.5

	PC19. backfill excavated areas to secure the installation	1	3	-	0.5
	PC20. clear the work area and dispose, reuse or recycle left over materials according to legislation, regulations, codes of practice and job specification	1	3	-	0.5
	PC21. clean and store tools and equipment according to manufacturer's recommendations and workplace procedures	1	3	-	0.5
	Total Marks	30	55	-	15
PSC/N0174	PC1. create a solid base for the structure to ensure its stability	1	2	-	1
	PC2. obtain the necessary materials, including cement, sand, aggregates, and steel bars	1	2	-	1
	PC3. mix the concrete ingredients, including cement, sand, and aggregates in the correct proportions	1	2	-	1
	PC4. pour the concrete into the formwork in layers	1	2	-	1
	PC5. compact the concrete and remove any air pockets	1	2	-	0.5
	PC6. smoothen the surface of the concrete	1	2	-	0.5
	PC7. identify the types of scaffolds and shuttering	1	1	-	0.5
	PC8. consider the safety regulations while setting up scaffold	1	1	-	0.5
	PC9. ensure the components of scaffolds are connected properly	1	2	-	1
	PC10. identify the type and size of shuttering as required	1	2	-	1
	PC11. ensure that the shuttering is assembled properly	1	2	-	1
	PC12. carry out the pouring of framework with concrete	1	1	-	1
	PC13. ensure the tools used in brickwork are in good condition.	1	1	-	0.5
	PC14. carry out testing of bricks on field	1	1	-	0.5

PC15. ensure bricks are soaked in water properly prior to the use	1	1	-	0.5
PC16. lay and fix bricks as per the applicable bond using mortar	1	2	-	0.5
PC17. identify the defects in brickwork that can possibly exist	1	2	-	0.5
PC18. carry out construction of brick masonry as per the standards	1	2	-	0.5
PC19. carry out removal of damaged element in brick masonry using different tools	1	2	-	0.5
PC20. replace the same with new bricks and ensure the proper bonding of old and new surface	1	2	-	0.5
PC21. identify materials and tools for plastering	1	1	-	0.5
PC22. carry out the sieving of aggregates as per the requirement	1	1	-	0.5
PC23. identify the type of plastering required	1	2	-	0.5
PC24. moisten out the dry surface of masonry before plastering	1	2	-	0.5
PC25. perform plastering operations on the wall	1	2	-	0.5
PC26. check for horizontal and vertical alignment using appropriate tools	1	2	-	0.5
PC27. identify the interval on which manhole is to be constructed as per the drawing	1	1	-	0.5
PC28. determine the size of manhole and prepare the appropriate mix of mortar for the foundation as per specification	1	1	-	1

	PC29. carry out laying of rcc foundation and finishing of the foundation using appropriate tools	1	2	-	1
	PC30. plaster the manhole from inside as per specifications	1	2	-	0.5
	Total Marks	30	50	-	20
PSC/N0166	PC1. understand water supply and drainage systems in rural India	0.5	1	-	0.25
	PC2. assemble pump components, equipment and prepare the tools, area and materials for the task as per Manufacturer's policy	0.5	1	-	0.25
	PC3. locate and mark position for inlet and outlet supply connections of pump	1	2	-	0.5
	PC4. fix the pump at the designated location as per instruction and connect the hoses of inlet and outlet supply to the pump	1	2	-	0.5
	PC5. make provisions for electrical and other required connections	1	2	-	0.5
	PC6. install and connect pump components without any damage to pump, fixture, pipe work and the surrounding environment followed by adjusting the pressure/flow as per required supply and demand	1	2	-	0.5
	PC7. check for cracks, defects and anomalies in the pumping apparatus, condition of couplings in the equipment, pumping on both suction and discharge sides	1	2	-	0.5
	PC8. check the oil level, fuel level, radiator coolant, air release valve and engine condition of a diesel operated pump and prime the same	1	1	-	0.5
	PC9. understand the usages and installation of different valves pertaining to plumbing and water management	-	-	-	-
	PC10. prepare a schedule for running the main pumps and the standby	1	2	-	0.5
	PC11. prime the centrifugal pump before start of operations before ensuring operation of the pump with full efficiency to improve output gain	1	2	-	0.5

PC12. operate the delivery valve; close bypass valves of reflux valve, sluice valve and butterfly valve; monitor sound, vibration, temperature and other related parameters to ensure smooth operation of the pump	1	2	-	0.5
PC13. check pump motor alignment and maintain input/output parameters	1	2	-	0.5
PC14. inspect the pump, related machinery and water supply system for faults, leaks, sparks, improper functioning, wear and tear or evidence of tampering	1	2	-	0.5
PC15. maintain a record of all pump operations timings, voltage, current, reading on gauges and flow meter, temperature, water level and any problem that occurred during the operations	1	2	-	0.5
PC16. perform operations on 3-Phase & Single-Phase Pump Operation Connections	-	-	-	-
PC17. identify, repair or replace sparking motors, leaking or worn out parts and tighten the foundation bolts	1	2	-	0.5
PC18. calibrate all vital instruments such as pressure gauge, vacuum gauge, ammeter, voltmeter, watt meters, frequency meter, tachometer and flow meter	1	1	-	0.5
PC19. conduct performance test of the pump discharge, head, efficiency and troubleshoot faults as per standard operating procedures	1	1	-	0.5
PC20. conduct various operations on pump control panel board for 3-phase and single phase pump	-	-	-	-
PC21. dewater, clean, disinfect and rinse sump and tank as per standard operating procedures	1	2	-	0.5
PC22. desilt the pump house area and perform leakage test to carry out rectification if needed	1	2	-	0.5
PC23. clean the dirt box or strainer and replace gaskets upon its wear and tear	1	2	-	0.5
PC24. prevent water seepage into the water meter and clean the chamber where the meter is installed	1	2	-	0.5

	PC25. disassemble and reassemble the watermeter for verification or repair	1	2	-	0.5
	PC26. check the range, zero setting of the flow meter, inspect for bearing wear out and deposits in flow meter or corrosion of attached pipes	1	2	-	0.5
	PC27. take action as per standard operating procedure to troubleshoot common faults in watermeters and flow meters	1	1	-	0.5
	PC28. operate water pipelines with required pressure by opening and shutting off the valves gradually	1	2	-	0.5
	PC29. flush the system to clear sediments; service the valve chamber and valves; inspect the pipelines for damage, wear and tear, leakage, entrainment and water hammer and locate the leaks in the pipes	1	2	-	0.5
	PC30. repair damaged pipelines and replace faulty parts like gaskets, valves joints and pipes that are not repairable	1	2	-	0.5
	PC31. start and shut off the filtration process and adjust the rate of filtration as needed by adding chemicals	1	2	-	0.5
	PC32. inspect equipment on a regular basis to ensure proper functioning and adherence to safety standards; monitor operating conditions, meters, gauges and collect and test water and sewage samples	1	2	-	0.5
	PC33. record meter, gauge readings, and operational data to operate equipment	1	2	-	0.5
	PC34. clean and maintain equipment, tanks, filter beds and other work areas	1	1	-	0.5
	Total Marks	30	55	-	15
PSC/N0175	PC1. identify the roles and responsibilities of an electrician	1	2	-	0.5
	PC2. ensure the electrical, hand and power tools are in good working condition	1	2	-	0.5
	PC3. ensure the safe storage of tools after and before use	1	1.5	-	0.5

PC4. perform cleaning of the tools with the help of brush reaked in oil, grease and dust	1	1.5	-	0.5
PC5. perform visual checks to the house wiring	1	2	-	1
PC6. identify electrical material requirements based on electrical fittings and layouts	1	2	-	1
PC7. identify the protecting device	1	2	-	1
PC8. able to identify the types of cable with colour coding, type of wire, neutral, earth, phase	1	2	-	1
PC9. check for quality, brand, gauge, specifications of wiring fixtures	1	2	-	1
PC10. read and interpret single phase wiring diagram	1	2	-	0.5
PC11. carry out necessary measurements of cables	1	2	-	0.5
PC12. carry out marking on wall	1	1	-	0.5
PC13. assist in planning and mark locations of raceways and electrical fixtures	1	1	-	0.5
PC14. carry out drilling, cutting works as and when necessary	1	1	-	0.5
PC15. identify the types of conduits and fixtures for installation	1	2	-	1
PC16. install electrical fixtures, fittings (such as DBs, switch boards, switches, sockets, lights and wall brackets) at specified locations	1	2	-	1
PC17. carry out termination of cables as per standard practice	1	2	-	1
PC18. perform necessary tests to ensure safe condition of electrical circuit during and post wiring activity using appropriate tools	1	2	-	0.5
PC19. ensure the temporary lightning arrangement is being carried out with the help of required tools.	1	2	-	0.5
PC20. measure earth resistance and leakage as per requirement, using appropriate electrical devices.	1	2	-	0.5

	PC21. carry out electrical earthing work adopting standard procedure and using appropriate earthing components as per instructions	1	1	-	0.5
	PC22. install earthing strips by embedding in concrete, screwing, bolting or by welding in high-rise structures	1	1	-	0.5
	PC23. establish new LV connection as per circuit load requirement	1	2	-	1
	PC24. ensure the temporary panel/db is disconnected with main power outlet.	1	2	-	1
	PC25. carry out installation of flexible conduit pipes through RCC structures or through chased wall surface as per instructions	1	1	-	0.5
	PC26. identify and install protective devices of correct power rating, at appropriate locations of wiring	1	1	-	0.5
	PC27. able to perform quality check for domestic electrical wiring and temporary panels	1	2	-	0.5
	PC28. adhere to electrical safety norms and act/report efficiently on detection of any unsafe situation	1	2	-	0.5
	PC29. identify the faults with lightning arrangement	1	1	-	0.5
	PC30. replace faulty electrical fixtures, fittings, LV wiring as and when necessary	1	1	-	0.5
	Total Marks	30	50	-	20
PSC/N0149	PC1. conduct survey to estimate the water requirements in consultation with the Village Water and Sanitation Committee (VWSC)	1	2	-	1
	PC2. undertake drinking water quality tests for the geographic area	1	2	-	1
	PC3. collate information for water budgeting and water quality mapping	1	2	-	1
	PC4. identify location in the community where water quality boards can be put up	1	2	-	1

PC5. collate community related data and suggestions for water conservation, grey water re-use and water usage efficiency potential	1	2	-	1
PC6. verify data and information collected before handover to the relevant authorities	1	2	-	0.5
PC7. provide suggestions for creating tools and techniques that will engage the community members	1	2	-	0.5
PC8. conduct stakeholder analysis	1	2	-	0.5
PC9. enroll communities to participate in various schemes for water conservation and water usage efficiency practices	1	2	-	0.5
PC10. co-ordinate with the village committees and gram panchayat for implementation of schemes for water conservation and efficient water usage	1	2	-	0.5
PC11. setup water quality board at gram panchayat for ensuring planning, cleaning and maintenance of water harvesting structures	1	2	-	0.5
PC12. facilitate the creation of a roadmap for Participatory Rural Appraisal (PRA) activities	1	2	-	0.5
PC13. engage communities through various tools of Participatory Rural Appraisal (PRA) in co-ordination with village committees and gram panchayat	1	2	-	0.5
PC14. ensure participation of diverse social groups of the village from different religions, castes and age groups for triangulation	1	2	-	0.5
PC15. initiate dialogue and discussion between community members to find solutions on critical issues like health, sanitation, hygiene, etc.	1	2	-	0.5
PC16. promote campaigns by conducting workshops, distributing flyers, organising rallies and other awareness building activities	1	2	-	0.5
PC17. impart training to various local level stakeholders for use and care of the systems and structures installed	1	1	-	0.5
PC18. identify the correct method of water sampling according to the standard operating procedure	1.5	2	-	1
PC19. obtain the water sample from the source and send samples for laboratory testing	1.5	2	-	1
PC20. test the water sample for its quality using the water testing kits	1.5	2	-	1
PC21. identify the TDS level and pH of the water	1.5	2	-	1

	PC22. identify for fecal contamination and heavy metals composition in water	1.5	2	-	1
	PC23. check for the various color coding in kit to ensure the different water quality parameters	1.5	2	-	1
	PC24. perform the various tests with the help of water quality testing	1.5	2	-	1
	PC25. share the water quality testing result with the appropriate higher authorities	1	1	-	1
	PC26. ensure that the quality of water is not preceding the water quality standards as per government guidelines.	1.5	2	-	1
	Total Marks	30	50	-	20
PSC/N0136	PC1. identify risks and hazards at the workplace	1	2	-	0.5
	PC2. wear personal protective equipment (PPE) as per the type of plumbing work	1	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	-	0.5
	PC5. adhere to organisational procedures for reporting hazards and incidents to relevant authorities	1	4	-	0.5
	PC6. establish ventilation before entering underground work areas	1	4	-	0.5
	PC7. work safely in and around trenches, elevated places and confined areas	1	3	-	0.5
	PC8. ensure tools and hazardous materials are not left unattended	1	3	-	0.5
	PC9. ensure good housekeeping in order to prevent hazards e.g. fire	2	3	-	0.5
	PC10. dispose waste materials and used PPE according to regulations and codes of practice	2	3	-	0.5
	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	-	1

	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	-	0.5
	PC14. check that the tools, equipment and materials are in good condition and as per industry standards before use	2	2	-	0.25
	PC15. use power tools and machinery that are grounded	2	2	-	0.25
	PC16. replace or repair split or loose tools before use	1	2	-	0.25
	PC17. store and transport various plumbing materials safely	2	2	-	0.25
	PC18. follow workplace emergency and evacuation procedures	2	3	-	0.5
	PC19. use a fire extinguisher correctly	2	3	-	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	3	-	0.5
	Total Marks	30	60	-	10
DGT/VSQ/N0101	Introduction to Employability Skills	1	1	-	-
	Constitutional values – Citizenship	1	1	-	-
	Becoming a Professional in the 21st Century	1	3	-	-
	Basic English Skills	2	3	-	-
	Communication Skills	1	1	-	-
	Diversity & Inclusion	1	1	-	-
	Financial and Legal Literacy	3	4	-	-
	Essential Digital Skills	4	6	-	-
	Entrepreneurship	3	5	-	-
	Customer Service	2	2	-	-
	Getting ready for apprenticeship & Jobs	1	3	-	-
Total Marks	20	30	-	-	

Grand Total	200	350	100	650
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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. https://ncvet.gov.in/sites/default/files/NCVET.pdf