

Model Curriculum

Plumber (General) Assistant

SECTOR: PLUMBING INDUSTRY
SUB-SECTOR: CONTRACTORS
OCCUPATION: PLUMBING
REF ID: PSC/Q0102, Version 1.0
NSQF LEVEL: 2



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

INDIAN PLUMBING SKILLS COUNCIL

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/Qualification Pack 'Plumber (General) Assistant' QP No. 'PSC/Q00102 NSQF Level 2'

Date of Issuance: December 11th, 2015

Valid up to: December 10th, 2016

* Valid up to the next review date of the Qualification Pack



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(Indian Plumbing Skills Council)

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Plumber (General) Assistant

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Plumber (General) Assistant”, in the “Plumbing” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Plumber (General) Assistant		
Qualification Pack Name & Reference ID.	PSC/Q0102		
Version No.	1.0	Version Update Date	01-12-2015
Pre-requisites to Training	5 th Class/Standards Pass (To be revised to 9 th Class/Standard post 31st December, 2017). In lieu of minimum qualification candidate has worked as a unskilled helper for minimum period of one year in the same role.		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Assist in execution of preliminary installation and undertake minor repairs to work including pre-installation activities like material preparation and tool handling. • Assist in minor repair and maintenance activities. • Communicate and discuss work flow, problems faced, possible solutions and pass on the learning within and outside the team • Interact with seniors to:- <ul style="list-style-type: none"> • Receive work instructions, discuss task status and receive feedback. • Interact with colleagues within and outside the team. • Maintain healthy, safe and secure working environment at work site. • Undertake work independently, be a good team player, be a competent listener for taking instructions. 		

This course encompasses three out of three National Occupational Standards (NOS) of “Plumber (General) Assistant” Qualification Pack issued by “SSC: Indian Plumbing Skills Council”.

Sr. No.	Module	Theory Duration (hh:mm)	Practical Duration (hh:mm)
1	<p>Assistance in installation and repair</p> <p>Theory Duration (hh:mm) 42hrs</p> <p>Practical Duration (hh:mm) 62hrs</p> <p>Corresponding NOS Code PSC/ N 0129</p>	<ul style="list-style-type: none"> • Introduction of basic plumber work • Information related to various pipes and fittings & fixtures • Knowledge of basic building construction • Perform Operations/ procedure on wall and ceiling • Preparation of mortar • Perform installations of fixtures • Perform various plumbing related operations/ procedure • Understand and perform testing using various methods • Knowledge of different power and hand tools • Repair of various types of fitting and fixtures • Know types of safety controls • Know Work flow and procedures at site • Clear the work area at site and waste disposal • Hand-over/take-over of site and equipment and work area • Working practices for plumbers • Understand significance of the individual’s role in work flow • Visit to actual work site • Understand units and perform measurements • Perform estimation and costing • Prepare and Interpret drawings • Understand the role in a team • Knowledge of material storing, stacking and specifications. 	<p>Pipe wrench, parrot pliers, slide wrench, Tap set and Die set complete, pipe bending machine, hacksaw, pipe vice, Screw drivers set, Double Ended spanner set, Allen Key set, Drill bit set, Caulking tools, Hammers, Files, measuring tape, plumb, L-Square, Spirit Level, Square Trowel, trowel-mason, Power Stone Cutter, Hammer-mason, blocking chisel, Hydraulic Testing Machine, Smoke Generator for testing of pipes and joints, balloon sets, weighing machine, pressure gauge, Powered pipe threading machine, Taps/faucets, shower head complete, sink, flushing tanks, urinal, urinal flush, bidet, bath tub, geyser, Clamps and Hangers, pipes, fittings and accessories as required.</p>
2.	<p>Coordination</p>	<ul style="list-style-type: none"> • Communicate with in the team • Communicate outside the team • Plan and prepare • Comprehend Worker manual 	

Sr. No.	Module	Theory Duration (hh:mm)	Practical Duration (hh:mm)
	<p>Theory Duration (hh:mm) 16hrs</p> <p>Practical Duration (hh:mm) 24hrs</p> <p>Corresponding NOS Code PSC/ N 0108</p>	<ul style="list-style-type: none"> Skills in the team members Understand responsibility for work Working in a team Understand Reporting structure and workflow management Understand work process communication and reporting of disruptions Understand the role in team 	
3.	<p>Environment, health and safety</p> <p>Theory Duration (hh:mm) 22hrs</p> <p>Practical Duration (hh:mm) 34hrs</p> <p>Corresponding NOS Code PSC/ N 0109</p>	<ul style="list-style-type: none"> Identify and select hand tools Identify problems and accuracy reporting Signage and barricade requirements at site Awareness of the signs of poor performance of tools and inefficiency Pre operational study as per manual Information regarding various first aid procedures Hazard analysis at sites the work environment welfare facilities guidance for specific types of work Reporting structure and workflow management in a team Prepare for emergency procedures Clearance of all work area Maintenance of equipment Environmental requirements for dealing with waste Understand the responsibilities in case of danger Reporting in the team Company policies on safety Evacuation and emergency procedures Learning from past hazards 	<p>Face Protection; Face mask/shield , Head protection: Safety Helmet (hard hat), Eye protection (safety glasses with rigid side shields), Safety Shoes/ footwear, Hand protection: hand gloves based on exposure presented, Long pants and shirts with sleeves extending over the shoulders, High visibility vest or other outer most high visibility clothing, Welder's caps, Approved liners, Tight weave cotton, Drawstrings in clothing. Fire extinguishers Type A,B,C&D, ladder, safety harness/rope/belt,</p> <p>Ear Protection: ear plugs/mufflers,</p> <p>Stretcher, First aid kit, Fire Alarm bell etc.</p>
	<p>Total Duration</p>	<p>Unique Equipment Required:</p> <p>Pipe wrench, parrot pliers, slide wrench, Die set complete, hacksaw, pipe vice, Screw drivers set, Double Ended spanner set, Allen Key set, Drill bit set, Drilling Machine, Caulking tools, Hammers, measuring tape, plumb, L-</p>	

Sr. No.	Module	Theory Duration (hh:mm)	Practical Duration (hh:mm)
	Theory Duration (hh:mm) 80hrs Practical Duration (hh:mm) 120hrs	Square, Spirit Level, Hydraulic Testing Machine, Smoke Generator for testing of pipes and joints, pressure gauge, Powered pipe threading machine, Taps/faucets, shower head complete, sink, flushing tanks, urinal, urinal flush, bidet, bath tub, geyser, Clamps and Hangers, pipes, fittings and accessories as required.	

Grand Total Course Duration: 200 Hours 00 Minutes

(This syllabus/ curriculum has been approved Indian Plumbing Skills Council)

Trainer Prerequisites for Job role: “Plumber (General) Assistant” mapped to Qualification Pack: “PSC/Q0102, Version 1.0”

Sr. No.	Area	Details
1	Job Description	To impart training on Plumber General Assistant. The core responsibility includes enhancement of knowledge, refining of understanding and improvement in performance of the trainees. Train the plumbers for installation and repair of basic plumbing systems including those of advanced sanitary fixtures as per manufacturer’s specifications in housing, commercial and institutional setups.
2	Personal Attributes	A Plumber Trainer should be free from socio-economic preferences and prejudice. He/ she should be well aware of new trends, products and techniques in the market. Besides being knowledgeable, he/ she should be energetic, motivating, innovative and good at communication. The trainer should be able to establish rapport with the trainees and employ innovative methods to impart instructions.
3	Minimum Educational Qualifications	Passed 10 th Class or Standard of Central or State Board of Education or equivalent as notified by Ministry of Human Resource Development, Govt. of India.
4a	Domain Certification	<p>“IPSC Certification in Plumber (General)II NSQF level 4 QP Ref Id : PSC/0110, Version 1.0 or equivalent QP with a minimum score of 70 percent”</p> <p>OR</p> <p>“ITI Certificate in plumbing trade with IPSC Certification in Plumber (General) NSQF Level 4 QP Ref Id : PSC/0110, Version 1.0 with a minimum score of 70 percent”</p> <p>OR</p> <p>“Diploma or Degree in Civil or Mechanical Engineering from a recognised institute or university or equivalent qualification as notified by Ministry of Human Resources, Govt. of India with an IPSC Certification in Plumber (General) NSQF Level 4 QP Ref Id : PSC/0110, Version 1.0 with a minimum score of 70 percent”</p>
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack QP Ref Id : SSC/Q1402, Version 1.0 approved by NSDC/NSDA with a minimum accepted score of 60 percent in aggregate.
5	Experience	<p>IPSC Certificate - 3 years.</p> <p>ITI in plumbing trade - 4 years.</p> <p>Diploma or Degree holders or equivalent in engineering - NIL.</p>

Annexure: Assessment Criteria

Assessment Criteria for Plumber (General)Assistant	
Job Role	Plumber (General) Assistant
Qualification Pack	PSC/Q0102, Version 1.0
Sector Skill Council	Plumbing

Sr. No.	Guidelines for Assessment
1	Pre-Assessment Examination- Learner shall be required to undertake a pre-assessment examination to determine the minimum qualification of the candidate
2	In-course assessment- Learner shall be required to participate in in-class activities
3	Assignments- Assignments shall be given in-class and have to be completed and handed over to the instructor for evaluation. Non-submission /Late submission of assignments shall be marked as 0.
4	Training/Field Tests- Learner shall be required to participate in demonstrations during site visits.
5	Practical Training- Apprentice training to be done at the site
6	Post Learning Assessment Examination- Learner shall be required to undertake a post learning final assessment examination to determine his learning of concepts, theories, use of tools and equipment, and practical applications of procedures, workflow etc.
7	Passing Qualification Pack- Learner should score a minimum of 50% marks in aggregate with a minimum of 40% in each NOS to pass the qualification pack. Learner shall be exempted to reappear in a NOS provided he has scored minimum of 50% marks in a NOS though he has failed to score a minimum 50% marks in aggregate to pass the qualification pack.
8	In case of successfully passing one or more number of NOS(s), the trainee is eligible to take subsequent assessment on the balance NOS(s) to pass the Qualification Pack.

Assessment outcome (NOS Code and Description)	Assessment criteria (PC)	Marks Allocation			
		Total Mark (300 MARKS)	Out Of	Theory	Skills Practical
1. PSC/ N 0129 Assistance in, preliminary installation and minor repair of plumbing system	PC1. assist in assembling pipe sections and fittings	100	10	3	7
	PC2. assist in cutting, threading and joining pipes and sanitary fixtures		10	3	7
	PC3. assist in cutting openings in structures		20	7	13
	PC4. install basic fixtures and fittings like taps, pipes etc.		10	3	7
	PC5. assist in assembling fittings, fixtures and tools required for the task		20	5	15
	PC6. assist in replacing defected pipes and pipe fittings		10	3	7
	PC7. assist in using hand and power tools or equipment used for cutting, threading and bending		10	3	7
	PC8. clear the work area and dispose the waste		10	3	7
	Total		100	30	70
2. PSC/N0108 Coordinating with the senior and other working team	PC1. receive work instructions and raw materials from reporting senior	100	5	2	3
	PC2. communicate to reporting senior about task status, repairs and maintenance of tools and equipment as required		5	1	4
	PC3. communicate any potential hazards and expected process disruptions		10	3	7
	PC4. handover completed task to reporting senior		10	2	8
	PC5. receive feedback from reporting senior		10	3	7
	PC6. report any anticipated reasons for delays		10	3	7
	PC7. work as a team with colleagues and share work as per the work load and skills		10	3	7
	PC8. work with colleagues of other teams		5	2	3
	PC9. communicate and discuss work flow related difficulties in order to find solution with mutual agreement		10	3	7
	PC10. taking instructions from the reporting senior		10	3	7
	PC11. report problem/incident etc.		5	2	3
	PC12. put team over individual goals		5	1	4
	PC13. resolve conflicts		5	2	3
	Total		100	30	70

Assessment outcome (NOS Code and Description)	Assessment criteria (PC)	Total Mark (300 MARKS)	Out Of	Marks Allocation	
				Theory	Skills Practical
3. PSC/N0109 Maintain a healthy, safe and secure working environment	PC1. to avoid accidents related to use of sharp tools and equipment	100	15	5	10
	PC2. attend and actively participate in the health and safety campaigns organized by the company or any other authority		10	3	7
	PC3. use or wear safety gear (helmet, gloves, goggles, safety shoes, ear plugs, etc.) as per the rules of the company		10	3	7
	PC4. attend fire drills or any other safety drills organized by the company or any other authority		15	4	11
	PC5. learn first-aid procedure		15	5	10
	PC6. use insect repellents and safe drinking water		10	3	7
	PC7. use site toilets and follow other hygienic practices		15	4	11
	PC8. understand the evacuation and emergency procedures		10	3	7
Total			100	30	70
TOTAL			300	90	210
Percentage Weightage:				30%	70%
Minimum Pass% to qualify:			50% in aggregate and 40% in a NOS		



Indian Plumbing Sector Skill Council

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