

Model Curriculum

Plumber General Assistant

SECTOR: PLUMBING
SUB-SECTOR: CONTRACTOR
OCCUPATION: PLUMBING
REFERENCE ID: PSC/Q0102, V1.0
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



Prof. (Dr.) Virendra Kumar Paul
(Indian Plumbing Skills Council)

TABLE OF CONTENTS

| | |
|---|-----------|
| 1. Curriculum | 01 |
| 2. Trainer Prerequisites | 05 |
| 3. Annexure: Assessment Criteria | 06 |

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. ID | PSC/Q0102 | | |
| Version No. | 1.0 | Version Update Date | |
| Pre-requisites to Training | 5th (To be revised to 10th post 31st December, 2017) | | |
| Training Outcomes | After completing this programme, participants will be able to: <ul style="list-style-type: none">• Assist and preliminary execute the installation and minor repair of work including pre-installation activities like material preparation and tool handling• Assist in minor repair and maintenance activities• Coordinate with seniors and other team members• Maintain healthy and safe at secure working environment. | | |

This course encompasses 3 out of 3 National Occupational Standards (NOS) of “Plumber (General) Assistant” Qualification Pack issued by “SSC: Indian Plumbing Skills Council”.

| Sr. No. | Module | Key Learning Outcomes | Equipment Required |
|---------|---|---|--|
| 1 | <p>Assistance in preliminary installation and repair</p> <p>Theory Duration (hh:mm) 41:36</p> <p>Practical Duration (hh:mm) 62:24</p> <p>Corresponding NOS Code PSC/ N 0129</p> | <ul style="list-style-type: none"> • Introduction of basic plumber work • work • Information related to various pipes and fittings & fixtures • Knowledge of basic building construction • Operations/ procedure on wall and ceiling • Preparation of mortar • Installations of fixtures • Various plumbing related operations/ procedure • Testing methods • Knowledge of different power and hand tools • Repairing of various types of fitting and fixtures • Types of safety controls • Work flow and procedures at site • Clear the work area at site and waste disposal • Handing-over/takeing-over of site and equipment and work area • Working practices for plumbers • Significance of the individual’s role • Units and measurements • Estimation and costing • Interpretation of drawings • Understanding the role in team | <p>Pipe, wrench, parrot pliers, slide wrench, hacksaw, Screw drivers set, Double Ended spanner set, Allen Key set, Drill bit set, measuring tape, Spirit Level, Hydraulic Testing Machine, Smoke Generator for testing of pipes and joints, balloon sets, weighing machine, pressure gauge, Clamps and Hangers, pipes, fittings and accessories as required.</p> |
| 2 | <p>Coordination Work effectively with colleagues</p> <p>Theory Duration (hh:mm) 16:00</p> <p>Practical Duration (hh:mm) 24:00</p> <p>Corresponding NOS Code PSC/ N 0108</p> | <ul style="list-style-type: none"> • Communicate with in the team • Communicate outside the team • Plan and prepare • Comprehend Worker manual • Skills in the team members • Understand responsibility for work • Working in a team • Report structure and workflow management • Work process communication and reporting of disruptions • Understand the role in team | <p>Laptop, white board, marker, projector,</p> |

| Sr. No. | Module | Key Learning Outcomes | Equipment Required |
|---------|--|---|---|
| 3 | <p>Environment, health and safety</p> <p>Theory Duration (hh:mm) 22:24</p> <p>Practical Duration (hh:mm) 33:36</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 Learn 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, Ear Protection: ear plugs/mufflers, Stretcher, First aid kit, Fire Alarm bell etc.</p> |
| | <p>Total Duration: Theory Duration 80:00</p> <p>Practical Duration 120:00</p> | <p>Unique Equipment Required: Pipe wrench, parrot pliers, slide wrench, hacksaw, Screw drivers set, Double Ended spanner set, Allen Key set, Drill bit set, Drilling Machine, Hammers, measuring tape, pressure gauge, Clamps and Hangers, pipes, fittings and accessories as required.</p> | |

Grand Total Course Duration: **200Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by [Indian Plumbing Skills Council](#))

Trainer Prerequisites for Job role: “Plumber (General) Assistant” mapped to Qualification Pack: “PSC/Q0102 v1.0”

| Sr. No. | Area | Details |
|---------|---|--|
| 1 | Description | <p>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 plumber Assistant to assist the plumber in Installation and repair of basic plumbing systems.</p> <p>To train the candidates on basic Tools & equipment used in Plumbing installation Process, Identification of Pipes, material, Sanitary fittings and fixtures.</p> |
| 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 12 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) NSQF level 3 or equivalent QP with a minimum score of 80 percent”</p> <p>OR</p> <p>“ITI Certificate in plumbing trade with IPSC Certification in Plumber (General) NSQF Level 3 or equivalent QP with a minimum score of 80 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 or equivalent QP 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: “SSC/Q1402”. Minimum accepted % as per respective SSC guidelines is 80%. |
| 5 | Experience | <ul style="list-style-type: none"> • IPSC Certificate - 3 years. • ITI in plumbing trade - 4 years. • Diploma or Degree holders or equivalent in engineering - NIL. |

Annexure: Assessment Criteria

| | |
|-----------------------------|------------------------------------|
| Assessment Criteria | |
| Job Role | Plumber (General) Assistant |
| Qualification Pack | PSC/Q0104, 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 zero. |
| 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 of actual work. |
| 6 | Post Learning Assessment Examination- Learner shall be required to undertake a post-assessment to determine his learning's of concepts, theories, use of tools and equipment, and practical applications of procedures, workflow. |
| 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. |

| | | Total Mark (400 MARKS) | Out Of | Marks Allocation | |
|--|--|------------------------|--------|------------------|------------------|
| | | | | 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. Assist 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 discuss the project / design with seniors | 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. Get the work reviewed and handover completed task to reporting seniors. | | 10 | 3 | 7 |

| | | | | | |
|--|---|------------|-----|----|----|
| | 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 | 1 | 4 |
| | | | 100 | 30 | 70 |
| 3. PSC/N0109 | | | | | |
| Maintain a healthy, safe and secure working environment | PC1. to avoid accidents related to use of sharp tools and equipment | | 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 | 100 | 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 & emergency procedure. | | 10 | 3 | 7 |
| | | | 100 | 30 | 70 |
| TOTAL | | | 300 | 90 | 210 |
| Percentage Weightage: | | | | 30% | 70% |
| Minimum Pass% to qualify: | | | 50% in aggregate and 40% in a NOS | | |