SYLLABUS FOR PLUMBING & SANITARY TRADE

Duration at Skills Training Institute : 600 Hrs
(Spread in three months)

1. Introduction to ITI : 3 Hrs
2. Introduction to the Trade : 3 Hrs
3. Introduction to Trade Glossary : 6 Hrs
4. Introduction to Tools & Equipment : 12 Hrs
   * Hand tools of the trade
   * Stock and dies
   * Pipe vice
   * Bench vice
   * Blow lamp stove
   * Ferrule m/c
   * Bending m/c

5. Documentation : 24 Hrs
   * Glossary of terms
   * Basic engineering drawings / sketches
   * Info sheets / job cards
   * Time sheets
   * Record book / log book
   * Store requisition

6. Basic Materials : 16 Hrs
   * Galvanized pipes
   * Cast iron pipes
   * PVC pipe
   * SW pipes
   * Fittings
   * Fixtures
   * Solder / Lead

7. Testing : 16 Hrs
   * Water test
   * Pressure test
   * Smoke test
   * Ball test
8. **Safety**
   : 24 Hrs

   * Health & Safety
   * Eye protection
   * Hand & Foot protection
   * Overall personal safety
   * Moving
   * Lifting
   * Carrying
   * Stacking
   * Working at heights (Ladders / scaffold)
   * Electricity

9. **Practice Modules**
   : 348 Hrs

   F1. Taps & Valves
   : 24 Hrs

   * Understanding working principles
   * Understanding methods of testing
   * Use of basic tools and bench vice
   * Selection of taps and valves
   * Dismantling taps & valves
   * Inspecting glands, washer
   * Assembling taps and valves in position
   * Ensuring no leaks when tested
   * Safety
   * Site tidiness

   F2. Cutting / Threading / Bending / GI Pipes
   : 48 Hrs

   * Use of hand tools
   * Use of cutting tools
   * Use of bending machine
   * Use of pipe Dies & Vice
   * Lubrication
   * Understanding basic sketches & drawing
   * Mark out and cut to size
   * Threading and bending
   * Awareness of tolerance
   * Safety
   * Site tidiness

F3. Jointing / Assembling GI Pipes
   : 48 Hrs

   * Understanding types of pipes & fittings
   * Understanding methods of joining
   * Use of chain wrench
* Interpretation of sketches & drawings
* Joining and assembling GI pipes with supplied fittings
* Importance of line & level
* Awareness of tolerance
* Safety
* Site tidiness

F4. PVC Pipe Bending : 24 Hrs

* Understanding types of PVC pipes and fittings
* Understanding methods of bending
* Use blow lamp & flame control
* Interpretation of sketches & drawings
* Mark out and cut to size
* Bend PVC pipes
* Importance of line & level
* Awareness of tolerance
* Safety
* Site tidiness

F5. PVC Jointing : 24 Hrs

* Understanding types of PVC pipe joints
* Understanding methods of jointing
* Use of hand tools
* Use of beveling reamer
* Use of blow lamp & flame control
* Application of solvents
* Assembly methods
* Interpretation of sketches & drawings
* Join PVC pipe
* Importance of line & level
* Awareness of tolerance
* Safety
* Site tidiness

F6. S.W. Pipe laying / jointing : 18 Hrs

* Understanding types of SW pipe
* Understanding methods of laying / jointing
* Use of hand tools
* Use of sight rails
* Assembly methods
* Interpretation of sketches & drawings
* Importance of gradient / alignment
* Understanding self cleansing gradients
* Join SW pipe
* Testing methods
* Awareness of tolerance
* Safety
* Site tidiness
F7. Cast Iron Cutting / Jointing : 18 Hrs
* Understanding methods of cutting
* Use of hand tools
* Interpretation of sketches & drawings
* Importance of alignment
* Understanding methods of jointing
* Use of chain wheel
* Introduction to gasket
* Handling lead
* Testing methods
* Awareness of tolerance
* Safety
* Site tidiness

F8. Alkathene flanging / Jointing : 18 Hrs
* Understanding Alkathene Flange
* Forming tools
* Assembly methods
* Types of fittings
* Connecting Alkathene to G.I. pipe
* Interpretation of sketches & drawings
* Importance of alignment
* Understanding methods of jointing
* Testing methods
* Awareness of tolerance
* Safety
* Site tidiness

F9. Making service connections : 24 Hrs
* Understanding service connections
* Understanding ferrules, water meter
* Introduction local authority by-laws
* Connect cast iron main with domestic service
* Using ferrule, valve and water meter
* Testing methods
* Safety
* Site tidiness

F10. Connecting house sewer to main : 24 Hrs
* Understanding sewer connection to main
* Understanding interceptor traps
* Introduction local authority by-laws
* Connect interceptor manhole with main sewer using SW pipes
* Testing methods
* Safety
* Site tidiness
F11. Fixing Sanitary Fixtures : 24 Hrs

* Understanding, handling, lifting sanitary fixtures
* Care in fitting and leveling
* Introduction local authority by-laws
* Fix low level water closet
* Connect to soil stack, seal connections
* Testing methods
* Safety
* Site tidiness

F12. Installing Water Pump, connecting supply pipe : 24 Hrs

* Understanding handling water pump
* Understanding working principle of Water pump and foot valve
* Methods of connections
* Connect pump to pump base
* Connect supply pipes, foot valves, etc.
* Care in fitting and leveling
* Introduction local authority by-laws
* Testing methods
* Safety
* Site tidiness

F13. Skill Consolidation Installation Work Project : 48 Hrs

* Interpretation of working drawings
* Types of sanitary fixtures and appliances
* Storage cistern, tanks
* Understanding local authority by-laws
* Distribution water supply pipe connections
* Position install sanitary fixtures and appliances
* Testing methods
* Safety
* Site tidiness

10. Introduction to Trade on Job Site : 64 Hrs

11. Revision : 60 Hrs

12. Final Testing & Evaluation : 24 Hrs