

**CERTIFICATE COURSE IN PLUMBING**  
**(6 MONTHS)**



**STATE BOARD OF TECHNICAL EDUCATION & TRAINING**  
**SANKETHIKA VIDYA BHAVAN, MASAB TANK, TELANGANA, HYDERABAD.**

### SYLLABUS FOR PLUMBING

SUB CODE	NAME OF THE SUBJECT	PERIODS/WEEK		TOTAL PERIODS PER 6 MONTHS	SCHEME OF EXAMINATION			
		Theory	Practicals		Duration Hours	Sessional Marks	End Exam Marks	Total Marks
PB-101	FUNDAMENTALS OF PLUMBING	03	--	50	02	--	100	100
PB-102	MAINTENANCE OF PLUMBING	03	--	50	02	--	100	100
PB-103	BASIC PLUMBING PRACTICE LAB	--	06	75	03	40	60	100
PB-104	PLUMBING PRACTICE LAB-2	--	06	75	03	40	60	100
	TOTAL	06	12	250	10	--	--	400

**SUBJECT TITLE : FUNDAMENTALS OF PLUMBING**  
**SUBJECT CODE : PB 101**  
**PERIODS/WEEK : 03**  
**PERIODS/YEAR : 50**

S.NO.	MAJOR TOPICS	NUMBER OF PERIODS
01	Introduction to the Plumbing	05
02	Introduction to Plumbing Glossory	05
03	Tools & Equipment in Plumbing	10
04	Documentation	10
05	Basic Materials	10
06	Testing	10
	<b>TOTAL</b>	<b>50</b>

**UNIT-1 : Introduction to the Plumbing**

**Unit-2 : Introduction to Plumbing Glossory**

**Unit-3 : Tools & Equipment in Plumbing :** Hand tools of the trade, Stock and dies, Pipe vice, Bench vice , Blow lamp stove , Ferrule m/c, Bending m/c

**Unit-4 : Documentation :** Glossary of terms, Basic engineering drawings / sketches, Info sheets / job cards, Time sheets, , Record book / log book, Store requisition

**Unit-5 : Basic Materials :** Galvanized pipes, Cast iron pipes, PVC pipe, SW pipes, Fittings, Fixtures, Solder / Lead

**Unit-6 : Testing :** Water test, Pressure test, Smoke test, Ball test

**SUBJECT TITLE** : **MAINTENANCE OF PLUMBING**  
**SUBJECT CODE** : **PB 102**  
**PERIODS/WEEK** : **03**  
**PERIODS/YEAR** : **50**

S.NO.	MAJOR TOPICS	NUMBER OF PERIODS
01	SAFETY PRECAUTIONS	05
02	Design of Fittings	05
03	Plumbing Operations	10
04	Jointing & Assembling	10
05	Service Connections	10
06	Installing Water Pump, connecting supply pipe	10
	<b>TOTAL</b>	<b>50</b>

**UNIT-1 : Safety & Precautions** : Health & Safety, Eye protection, Hand & Foot protection, Overall personal safety, Moving, Lifting, Carrying, Stacking, Working at heights (Ladders / scaffold), Electricity

**Unit-2 : Design of Fittings** : 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

**Unit-3 : Plumbing operations** Cutting / Threading / Bending / GI Pipes

**Unit-4 : Jointing & Assembling** : 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

**Unit-5 : Service Connections** : 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

**Unit-6 : Installing Water Pump, connecting supply pipe** : 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

**SUBJECT TITLE** : **BASIC PLUMBING PRACTICE LAB**  
**SUBJECT CODE** : **PB- 103**  
**PERIODS/WEEK** : **06**  
**PERIODS/YEAR** : **75**

S.NO.	MAJOR TOPICS	NUMBER OF PERIODS
01	TAPS & VALVES	12
02	Cutting / Threading / Bending in GI Pipes	12
03	Joint/ Assembling with GI Pipes	12
04	Practice with PVC Pipes	12
05	Service Connections	12
06	sanitary Fixtures	15
	<b>TOTAL</b>	<b>75</b>

**UNIT-1 : TAPS & VALVES** : 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

**Unit-2 : Cutting / Threading / Bending in GI Pipes** : 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

**Unit-3 : Joint/ Assembling with GI Pipes** : 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

**Unit-4 : Practice with PVC Pipes** : PVC Pipe Bending, PVC pipes and fittings, Mark out and cut to size, Sketches & Drawings of Pipes

**Unit-5 : Service Connections** : 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

**Unit-6 : sanitary Fixtures** : 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

**SUBJECT TITLE** : **PLUMBING PRACTICE LAB-2**  
**SUBJECT CODE** : **PB- 104**  
**PERIODS/WEEK** : **06**  
**PERIODS/YEAR** : **75**

S.NO.	MAJOR TOPICS	NUMBER OF PERIODS
01	Installing Water Pump	12
02	Practice on Appliances	12
03	Practice on cistern, tanks	12
04	Testing on Pipe Connection with Water	12
05	Testing on Pipe Connection with Pressure	12
06	Testing on Pipe Connection with smoke & Ball	15
	<b>TOTAL</b>	<b>75</b>

**UNIT-1 : Installing Water Pump:** connecting supply pipe : 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

**Unit-2 : Practice on Appliances**

**Unit-3 : Practice on cistern, tanks**

**Unit-4 : Testing on Pipe Connection with Water**

**Unit-5 : Testing on Pipe Connection with Pressure**

**Unit-6 : Testing on Pipe Connection with smoke & Ball**