PLUMBING [PLUM]

General Information :

1.	Name of the Trade	:	Plumbing
2.	Entry Qualiflcation	:	Passed Class VIII
3.	Duration of Training	:	06 Months. [Under Vocational Short Term Course]

Objective of the Course :

The objective of the course is to impart necessary competencies with the focus on technical competencies skill and knowledge so that they are able to do Plumbing works for any structure and fix all sorts of taps, fittings, toilet arrangement and drainage works.

Plumber has significant role in water supply and sanitation works in cities and towns. Tap connection for drinking water from main water resources and drainage arrangement has become common highs for health point of view. Fixing of toilets too is vital.

Employment opportunities:

As per as wage employment is concern, after completion of the course the student can join in any water works department, public health departments, private hospitals, and Industries as a planner to take care of Sanitation system.

At present, the service of the plumbing are more realized like fitting taps, pipe connections, drainage pipe connection, creation of water basins, sinks, Urinal flashing arrangement and also attending day to day servicing for those items.

Course Break-up :

(a)	Practical I instruction	:	288 Hours.
(b)	Theoretical instruction	:	67 Hours.
(c)	Entre preneurial Instruction	:	05 Hours.
			Total = 360 Hours.

Marks Alloted :

(a) Practical	: 400
(b) Theory	: 100

The Course content is to be covered in less then 26 weeks since some weeks will be used for enrolment procedures, leave of the instructors, holidays, examination and tests, industrial visits etc.

Industrial Visit :

Industries cum study four at various work places to take practical knowledge with the modern plumbing works.

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MODULE- I

Week	Theory	Practical
1	Familiarization of the trade, types of works to be done plumbing works.	Importance of the trade, safety precautions to be taken while doing.
2	Use of hand tools, names of the tools.	First aid, usage of tools and determine the materials from which they are made.
	Description of soil waste pipe, vent and its importance, siphon pipe and its importance.	Cutting of pipes, Fixing of waste pipe with bends, junction, jointing, fixing of vent pipe.
4	Types of taps and its uses and kitchen.	Fixing of floor taps, nanhi tap in bath.
5.	Slow sand filters and mechanical, filters, impurities in water Pipes.	Simple pipe connections using G.I. fittings
6.	Values used in plumbing system (sluice valve), refluxvalve,;scourvalve, air valve, and pressure relief valve.	Laying water pipe connection to the sanitary fittings. Types of valves and fittings.
7	Free system, grid iron and radial system. Description of C.I. pipes and fittings.	Laying and jointing of cast iron pipes (lead pouring and lead caulking)
8	Water main street line in water storage as soil pipe and drainage system.	C.I. Socket pipe heavy joining as well molten lead.
	PVC description of ISI specifications of pipes.	Practicing on cutting and shaping PVC pipes to sizes, use and fixing of PVC pipes.
10	Methods applied lift pump valves and taps used in service connection, air	Installing hand pump, finding out the
	Lock in the pipes and its removal Storage tanks for general water supply purpose. Steel tanks, masonry tanks matic float switch underground storage tanks.	Erecting simple water supply system as per layout. Introducing valves where autoever necessary and connection to the tan ks.
12	Causes for damage in taps, valves and water meter and tank, etc. methods of rectification and modification	Reconditioning of tap,s, vaJves, flushing tanks. Testing for correct functioning.

MODULE - II

Week	Theory	Practical
13	Description of sanitary fitting. General points to be observed when choosing sanitary fittings.	Installing Indian type W.C. with high-level cistern including fixing flush pipe connection, water connection and connection the outlet to the drainage line or inspection chamber.
14	Description of Indian style W.C. and R.W.C. standard sizes, types Precautions to be observed while installing.	Installing western WC with low level flushing, cistern with flush pipe connection, fixing of double flap seat, connecting the outlet to the drainage line.
15	Types of urinal, description of flushing, devices, lipper automatic tanks, Principles of siphon valves in flushing system.	Installing a urinal with automatic flushing system connecting the same to the inspection chamber.
16	Description of wash basin, its standard sizes and accessories required for installing wash basin, sizes of mirror, towel rail, glass shelf, precautions to be observed while installing.	Installing of wash basin with lead waster or PVC waste pipe, connecting of the pillar tap to service connection, soap dish, connect the waste to the gully trap or floor trap.
17	Description sink types of sink, sizes of ' kitchen, sink, pantry, laundry sink, sizes of waste outlets.	Installing a sink with drain board, waste outlet conneeting the waste outlet with all fittings water service connection to the sink.
18	Description of bath tub, accessories cold required for installing a bath tub.	Installing a bath tub and connection with shower, over flow and connection to the sink.
19	Importance of introducing the trap of outlets the sanitary fittings: Deep seal traps arrangements and low seal traps.	Method of arranging the waste for urinals, flushing.
20	Conservancy system and water carriage system Combined system.	Laying and jointing of store ware pipe with hetp of sight rail and bounding rod, jointing of stone ware pipes.
21	Standard length of stone ware pipes, pipe sizes; self-cleaning velocity, and sewage bonding system Rod.	Laying and jointing of store ware with help of sight rail and
22	Earth work excavation and laying drain pipes. Precautions to be observed.	Fixing of a fully trap and connecting the same to a chamber.
23	Description of vent pipes its necessity. Traps used in drainage pits, and line, manholes, cess pool, soak pits, septic tanks, size of septic tank according to the users.	Providing vent pipe fromstarting chamber construction of soak pit of septic tanks.
24	Preparation and fixing up hot water supply as per layout.	Fixing up hot water supply. Domestic boilers, geysers, installation of hot water system.
25	Causes and remedies. Prevention of corrosion.	Cleaning of sanitary fittings leakage and repairs.

ENTREPRENEURIAL INSTRUCTION

SL No.	Course Curriculum	Hours
1.	Brief idea on nature of small business management and Industrial Technical skill.	
2.	Preparation of schemes and vetting to Financial Institutions/ Lead Bank for obtaining loans.	
3.	Rules for setting up of business / production Unit.	
4.	Maintenance of Accounts; Labour Capital etc.	
5.	Man Management, Communication, Motivation.	
6.	Operational Management.	
7.	Market Survey.	
8.	Quality Control.	
9.	Visit to Industrial units for gathering idea to start the unit.	
10.	Choice of technology as per demand of local people of the District / State.	
11.	Knowledge of Sales Tax etc.	
12.	Brief idea for Registration of SSI, Trade License, Project Report, Proposal for loans etc.	
		Total 05