



Gujarat Council of Vocational Training Gandhinagar



कौशलम् बलम्

1. Name of Course:

PLUMBING ASSISTANT (GENERAL)

N.C.O. No. for Skills Covered:
(Please refer National Classification of
Occupations -2004 available
on www.dget.nic.in)

2. Engineering OR Non-engineering: Engineering:

3. No. of students per batch: 16

4. Duration in Hours. : 2600

5. Duration in Month: 12 @ 38 hours/Week.

5. Examination Scheme:

No.	Name of Subject	Teaching Hours during full course.	Maximum Marks. (Excluding Sessional)	Minimum Marks required for Passing (Excluding Sessional).	Sessional Marks if any.
Subject-1	Theory	416	100	40	-
Subject-2	Practical	1976	400	180	-
Subject-3	EXTRA CURRICULAR (Foundation + Industrial Attachment)	208	-	-	-
Subject-4					
Subject-5					

7. Entry qualification for Trainee:

Minimum entry qualification (Essential):	8 TH PASS 10 + 2 SYSTEM
Desirable:	

3. Minimum qualification for Trainer:

Minimum qualification (Essential):	DIPLOMA IN MECHANICAL ENGINEERING OR CIVIL ENGINEERING
Desirable:	





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9. Syllabus Committee Member:

Sr. No	Name	Organization	Designation	Technical Qualification	Experience in Years	Signature
1.	SMT A.P.PATEL	ITI MANINAG AR	PRINCIPAL CLASS- 1	B.E.MECHA NICAL	2 YEAR(in Gov) Total 12 year	<i>Apatu</i>
2.	MR.N.R.OZA	ITI MANINAG AR	PRINCIPAL CLASS- 1	DIPLOMA IN MECHANIC AL	32 YEAR	<i>Ozark</i>
3.	MR.G.K.SHRI MALI	ITI SARKHEJ	S.I.PLUMBER	ITI PLUMBER	24 YEAR	<i>R.R.</i>
4	MISS M.C.PADVI	ITI MANINAG AR	S.I. PLUMBING ASSISTANT	DIPLOMA IN ARCHITECT URE ASSISTANT SHIP	2 YEAR	<i>Padvi</i>
5	MR.P.J.SOLA NKI	ITI MANINAG AR	G.L CARPENTER	DIPLOMA IN CIVIL ENGG.	5 MONTHS	<i>Fancy</i>
6						
7						

10. Terminal Skills of trainee: (Should be well defined and having reference to NCO):

The trainee, after successful completion of training, will have following skills...

- 1 Trainee Will Get Knowledge About Plumbing Assistant.
- 2 Trainee Will Recognized Accessories And Tolls Of Plumbing.
- 3 They Will Do Work In Plumbing Field.

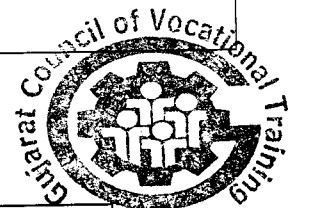
11. Approximate cost of Tools / Equipments / Machinery for

Rupees

2,75,000/-

Reference Year

2013





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Starting one batch of the course:

12. Area required for practical / Workshop for one batch.

74.88Sq. Meter

13. Minimum Power connection required

2545 W.

14.1 No of items in Standard list of Machinery:

5 NOS

14.1.1. Page NO from 08 to 09.

14.2 No of items in Standard list of Shop outfit:

214 NOS

14.2.1. Page NO from 04to 09.

14.3 No of items in Standard list of Trainee Toll-Kit:

306 NOS

14.1.1. Page NO from 04 to 04 .

***** FOR OFFICIAL USE *****

Approved by GCVT in Governing Body meeting on

21.2.2014

Syllabus implemented w.e.f. admission session

Next session.

Revision History :

1. Revision No..... Revision Date.
2. Revision No..... Revision Date.
3. Revision No..... Revision Date.





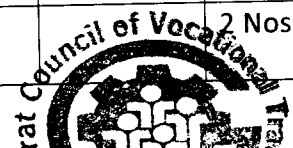
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कौरालम् बलम्

Standard List of Machinery - Equipment / Shop-outfit / or Trainee Toolkit For Trade of PLUMBING ASSISTANT

Sr. No.	Description of Item with detailed specifications	Item type i.e. Machinery / Equipment OR Shop Outfit OR Trainee Toolkit	Quantity Required per one Batch of Students	Quantity Required per one Batch of Students for Instructor	Total Quantity Required (Total of previous two columns)
1.	Rule Steel 300 mm both in inch and mm	Trainee Toolkit	16NOS	1 NO	17 NOS
2.	Rule Wooden 4 fold, 600 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
3.	Hacksaw Frame adjustable for 250 to 300 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
4.	Scriber 200 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
5.	Centre punch 100 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
6.	Chisel Cold flat 20 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
7.	Hammer ball pein 800 grams	Trainee Toolkit	16NOS	1 NO	17 NOS
8.	Hammer ball pein 300 grams	Trainee Toolkit	16NOS	1NO	17 NOS
9.	File flat rough 300 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
10.	Level spirit wooden 300 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
11.	Plumb bob 50 grams	Trainee Toolkit	16NOS	1 NO	17 NOS
12.	Trowel C-125-I S: 6013	Trainee Toolkit	16NOS	1 NO	17 NOS
13.	Stillson wrench 200 & 350 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
14.	Screw Driver 250 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
15.	Wooden Mallet small I S: 2022	Trainee Toolkit	16NOS	1 NO	17 NOS
16.	Cutting pliers 200 I S : 3650	Trainee Toolkit	16NOS	1 NO	17 NOS
17.	Steel tape (5m)	Trainee Toolkit	16NOS	1 NO	17 NOS
18.	Pipewrench 200 mm	Trainee Toolkit	16NOS	1 NO	17 NOS
19.	Surface plate 400 X400 mm Grade I	Shop Outfit	1 No.	-	1 No.
20.	Scribing Block, Universal, 300 mm	Shop Outfit	2 Nos.	-	2 Nos.





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					कैशालम बलम 2 Nos.
21	Hand Vice, Jaw 50 mm	Shop Outfit	2 Nos.	-	2 Nos.
22	File Flat, Smooth 200 mm	Shop Outfit	2 Nos.	-	2 Nos.
23	File Half Round, Rough 300 mm	Shop Outfit	2 Nos.	-	2 Nos.
24	File, Square, rough 250 mm	Shop Outfit	2 Nos.	-	2 Nos.
25	File Flat Rasp 250 mm	Shop Outfit	2 Nos.	-	2 Nos.
26	File Triangular Smooth 200 mm	Shop Outfit	2 Nos.	-	2 Nos.
27	File Square Smooth 200 mm	Shop Outfit	2 Nos.	-	2 Nos.
28	Chisel Cold Flat 20 mmX300mm	Shop Outfit	2 Nos.	-	2 Nos.
29	Chisel Cross Cut 6X150 mm I S-402	Shop Outfit	2 Nos.	-	2 Nos.
30	Chisel Round Nose 3X150 mm I S -402	Shop Outfit	2 Nos.	-	2 Nos.
31	Chisel Diamond Point 6X150mm	Shop Outfit	2 Nos.	-	2 Nos.
32	Tap and Die set to cut B.S.F. , B.S.W. and metric threads of sizes No.6 to M-12	Shop Outfit	1 set each	-	1 set each
33	Punch , Letter set	Shop Outfit	1 No.	-	1 No.
34	Punch , Number set	Shop Outfit	1 NO.	-	1 NO.
35	Chase Wedge 50 mm	Shop Outfit	2 Nos.	-	2 Nos.
36	Stick setting in 350X50	Shop Outfit	2Nos.	-	2Nos.
37	Saw Plumber 300mm	Shop Outfit	4 Nos.	-	4 Nos.
38	Spanner monkey up to 50mm	Shop Outfit	2 Nos.	-	2 Nos.
39	Cutter ,Pipe, wheel type 6mm to 25mm	Shop Outfit	1 No.	-	1 No.
40	Pipe jointer , lead , Universal	Shop Outfit	1 No.	-	1 No.
41	Oil stone 150X50X25mm	Shop Outfit	2 Nos.	-	2 Nos.
42	Snip Straight 250mm	Shop Outfit	4 No.	-	4 No.
43	Try square 200mm	Shop Outfit	4 Nos.	-	4 Nos.



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44	Inside Caliper 150mm	Shop Outfit	2 Nos.	-	2 Nos.
45	Caliper outside 150mm	Shop Outfit	4Nos.	-	4Nos.
46	Odd leg 6Caliper 200mm	Shop Outfit	17 Nos.	-	17 Nos.
47	Tenon saw	Shop Outfit	2 Nos.	-	2 Nos.
48	Hand Saw	Shop Outfit	2 Nos.	-	2 Nos.
49	Mortise Chisel	Shop Outfit	2 Sets.	-	2 Sets.
50	Firmer Chisel	Shop Outfit	2 Sets.	-	2 Sets.
51	Mallet Medium IS: 2922	Shop Outfit	2 Nos.	-	2 Nos.
52	Jack plane	Shop Outfit	2 Nos.	-	2 Nos.
53	Pliers combination, 200 mm	Shop Outfit	2 Nos.	-	2 Nos.
54	Blow lamp 500 mili litre	Shop Outfit	4 Nos.	-	4 Nos.
55	Pipe opener	Shop Outfit	1 No.	-	1 No.
56	Washer cutter	Shop Outfit	1 No.	-	1 No.
57	Plumber Kit containing Tricum, Pavado, Tagaru, dai and dia stocke, pipe cutter, and water pliers.	Shop Outfit	2 sets.	-	2 sets.
58	Bobbin and Follower	Shop Outfit	2 each	-	2 each
59	Bend Bolt	Shop Outfit	2 Nos.	-	2 Nos.
60	Sheet Lead Knife	Shop Outfit	2 Nos.	-	2 Nos.
61	Chipping Knife	Shop Outfit	2 Nos.	-	2 Nos.
62	Mirror 100X150 mm	Shop Outfit	2 Nos.	-	2 Nos.
63	Splash Stick	Shop Outfit	2 No.	-	2 No.
64	Soil pot with brush	Shop Outfit	1 No.	-	1 No.
65	Pot- Hook	Shop Outfit	1 No.	-	1 No.
66	D. E. Spanners 7X8, 10X11, 13X1. 7, 19X2.2, 24X27 IS:2028	Shop Outfit	2 Sets	-	2 Sets
67	Plumbers Laddle	Shop Outfit	2nos.	-	2nos.



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68	Jointing Cramp	Shop Outfit	2 nos.	-	2 nos.
69	Pipe stock and dies complete with stocks, bushing , bushing holders, Taps and wrenches sizes covered, to suit pipes of bore dia 6,8,10,20,25,32,40,&50mm	Shop Outfit	4 sets	-	4 sets
70	Pipe vice to grip up to 77 mm is -2587Tool caulking set of 5	Shop Outfit	8 nos.	-	8 nos.
71	Tool caulking set of 2	ShopV Outfit	2 Nos	-	2 Nos
72	Stillson pattern pipe wrenches 450 mm to take pipe up to 52 mm dia l s - 4003	Shop Outfit	2 sets	-	2 sets
73	Stillson pattern pipe wrenches 300mm to take pipe 20 mm to 32mm	Shop Outfit	2 sets	-	2 sets
74	Banchvise 125 mm	Shop Outfit	10 Nos	-	10 Nos
75	Chain :pipe wrench 90mm -650 is 4123	Shop Outfit	2sets	-	2 sets
76	Adjustable, spanner, A-375, IS- 6149	Shop Outfit	2nos	-	2 nos
77	Pipe bender, manually operated	Shop Outfit	1no	-	1 no
78	Leg vice, 75mm jaw on Stand IS -2588	Shop Outfit	1no	-	1 no
79	Hand drill 6mm capacity with drill chuck	Shop Outfit	1no	-	1no
80	Drill Twist (straight shank) 3mm to 6mm	Shop Outfit	1set	-	1 set
81	working bench 2400x1200x750mm with 4 voice 125 mm jaws	Shop Outfit	2nos.	-	2 nos.
82	Bath tub	Shop Outfit	2 no.	-	2 no.
83	Stop cock 20 mm IS- 781	Shop Outfit	4nos.	-	4nos.
84	Wash Basin (16"X14"X10") Equivalent metric)	Shop Outfit	2nos.	-	2nos.
85	Water Heater 22 litres	Shop Outfit	1no	-	1no



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86	Water closet (European type p) complete with over head cistern	Shop Outfit	1set	-	1set
87	Water closet (Indian type) complete with over head cistern	Shop Outfit	1set	-	1set
88	Urinal wall type complete with automatic system	Shop Outfit	1set	-	1set
89	Water meter	Shop Outfit	2nos.	-	2nos.
90	Steel lockers with 8 drawers Metal rack (1800x1500x450mm)	Shop Outfit	3nos.	-	3nos.
91	Metal rack (1800X1500X450mm)	Shop Outfit	2no	-	2no
92	Desk	Shop Outfit	1nos	-	1nos
93	Stool	Shop Outfit	10 nos	-	10 nos
94	Black Board with Casel	Shop Outfit	1no	-	1no
95	Fire Extinguisher	Shop Outfit	1no	-	1no
96	Fire Buckets with stand	Shop Outfit	1nos.	-	1nos.
97	Steel Almirah (large)	Shop Outfit	2no	-	2no
98	Ratchet brace with post and clamp flat drill 6 to 25mm by 0.2mm	Shop Outfit	1set	-	1set
99	Electric pump, 1 HP	Machinery	1 no.	-	1 no.
100	D.E. PEDESTAL GRINDER WITH TWO WHEELS 175MM ROUGH AND SMOOTH	Machinery	1 No.	-	1 No.
101	Hydraulic pressure machine for testing leakage in GI pipe fittings etc.	Machinery	1No.	-	1No.
102	Sight rail and bonning rod	Shop Outfit	1 No.	-	1 No.
103	Ratchet pipe die 15 mm to 32 mm	Shop Outfit	1 No.	-	1 No.
104	Bench drilling machine with chuck and key upto 15mm capacity	Machinery	1 No.	-	1 No.
105	Double face hammers	Shop Outfit			2 No.



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106	Doormat, Pickle, Spade, Girmale	Shop Outfit	1 each	-	1 each
107	Pipe bender(Hydraulic type)	Shop Outfit	1 No.	-	1 No.
108	Instructor table	Shop Outfit	1 No.	-	1 No.
109	Instructor chair	Shop Outfit	1 No.	-	1 No.
110	Anvil50or 63 kg.IS-510	Shop Outfit	1 No.	-	1 No.
111	Melting Port	Shop Outfit	1 no	-	1 no
112	Gimlet 6mm	Shop Outfit	2 no	-	2 no
113	Soldering copper hetech type 500GMS	Shop Outfit	4 No.	-	4 No.
114	Screw driver	Shop Outfit	2 set	-	2 set
115	D.E. Spenner set of 12 (6 to 32mm)	Shop Outfit	4 set	-	4 set
116	Pipe Bender Spool Type	Shop Outfit	1 nos	-	1 nos
117	Forge portable hand blower	Shop Outfit	1 nos	-	1 nos
118	Plier monkey	Shop Outfit	4 nos	-	4 nos
119	Portable Drill machine 250V 13mm	Machinery	1 nos	-	1 nos





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(As many sheets as required should be used to accommodate all items)

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Name of Syllabus: PLUMBING ASSISTANT

Sector:

Terminal Competency :

PRACTICAL	TRADE THEORY
Introduction of trade, safety, institute, precaution and field and treatment.	Introduction of institute, importance of trade and it's development on field.
Use of steel rules, engineers square, Scriber and dividers for marking out from drawing. Technique of handling properly the various Fitter's hand tools. Use of Calipers.	Fitters common hand tools names, descriptions and materials from which they are made.
Use of hacksaw, centre punch, Marking, filing, drilling holes and sawing. Different types of Files & filing to line.	Description of simple fitting operations- hacksawing, punching and filing. Types of files used commonly. Marking instruments and their use. Description of simple drilling machine.
Tapping and threading on pipes. Making of studs and bolts.	A type of taps materials use and care, types dies use and care.
Practicing chipping operation, Grinding of chisels.	Description, types and uses of: vices, hammers & cold chisels.
Reverting practice .	Different types of fasteners and their use.
Use of locking devise	Simple description of locking devise. Use of soldering iron.
Demonstration and uses of Carpenter's hand tools involving sawing, planning, chiseling and making simple joints.	Description and uses of Carpenter's hand tools used for simple operations such as marking, sawing, planning and making simple joints. Common types of wood- their description and use.
Practice of gas welding: Joining of pipes of different diameters and thickness by welding. Simple repair work by welding.	Gas welding: Gases used, Method of gas welding, Safety precautions to be observed.
Use masons hand tools straight edge sprit level plumb bob, square etc.	Safety precaution and elementary first aid related description and use of mason's hand tools.
Simple wall repairing like crack & hole.	Notes on Bricks & Cement and lime proportion, cement, soil & water for simple brick lying.
Use of mason Raw material & their	Types of Bricks Bond.



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simple brick lying including setting out work with mason hand tools.	
Construction of .gulley traps using brick in cement material.	Description on gulley traps.
Construction of inspection chamber and manhole.	Method of inspection chamber and manhole.
Repairing damaged portion of the wall and flooring using cement material concerts.	Theory on repair damaged portion for flooring.
Use & cure plumber hand tools and equipment identification demonstration and precautions to be observed.	Safety precaution and elementary first aid related description and use of plumber hand tools.
Cutting OF pipes of different materials and different diameters.	Pipe cutting tools, Use and care description various types of pipes used in plumbing.
Simple pipe fitting upper layout method	Types of wrenches or pipe fitting in air lock & water hammer.
Fitting of rain water pipe with RW head show and its material and using of floor traps, traps and buch of kitchen	Description of rain water pipe.
Use traps in house drainage construction PQ and Ps trap.	Types traps PQ and PS materials.
Threading of G.I. pipes using pipe die various sizes up to 25mm.	Descriptions on pipe die and die stock.
G. I. Pipe fitting practice & use of pipe fitting accessories.	Sources of water impurities of water simple purification water.
Leakage checking with leakaging Me & other techniques repairing of the leak age .	Method of prevent leaks and leak detection techniques.
Pipe bending with pipe bender .	Pipe bender hydrometer.
Saddle connection from PVC main line to house.	Saddle connection from PVC main line for house service stapes.
House plumbing according to plan.	Use of Tee, elbow, Reducer, Nipple, Plug and other plumbing devise.
Layout of water pipe convection of the sanitary fitting using different types of valve.	Description of various types of valve.
Installing of wash basin with PVC waste pipe, connecting of the pillar tap to service connection fixing or mirror plate,glass,shelf trowel rail, soap dish etc..	Theory on wash basin with connection pipe & waste pipe.
Installing of urinal.	Theory on urinal.
Installation of Indian type water closet.	Description of Indian type water closet.
Installation of urepion type water closet.	Description of urepion type water closet and flushing tank.



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Installation of bath tub with hot and cold water connection with shower, overflow and waste connection soap dish etc..	Bath tub and its accessories require for installing a bath tub.
Installation of sink with drain board waste pipe connecting the waste outlet with all fittings water service connection to the sink.	Description of sink their types, sizes of kitchen sink pantry sink. Fixing of sink according to their suitability.
Installation of electric pump.	Installation of electric pump.
Repairing of valve and tapes.	Causes of damage in tap valve and tanks.
Repairing of valve and tapes.	Causes of damage in tap valve and tanks.
Practice on hot water line connection (for Gezer).	Simple Description of Gezer.
Use of various type of pipe.	Theory on various type of pipe such as antic phonic pipe, cast iron pipe, rain water pipe, soil pipe etc..
Installing water meter	Theory on water meter
Cleaning of sanitary fitting, scraping and painting of pipes.	Corrosion its causes and remedies prevention of corrosion.
Practicing on cutting and shaping pvc pipes size, use and fixing of pvc pipe fitting preparation of pvc pipe joints.	Pvc description of ISI specification of pipe Properties and use in plumbing work Method of cutting and preparing joints.
Laying of PVC pipe according of drawing.	PVC fitting their description and use method of laying out of PVC saddle connection for house service.
Saddle connection from PVC main hole for house service.	Drawl of water from river bed, infiltrations wells and infiltrations galleries.
Revision	Revision
Test	Test

Signature:

