

Plumbing (2015)

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Q10. Answer

Plumbing is the of measuring, cutting, connecting fittings and repairing pipes water (fluid) for drainage sanitary appliance and water supply.

The main types of pipes used in plumbing include:

- 1) Steel pipes
- 2) Copper pipes
- 3) Plastic pipes

Q11. Answer

Measuring tools

- 1) Tape measure
- 2) Try Square
- 3) Vernier caliper
- 4) Spirit level

- 5) Plumb bob
- 6) Micrometre
- 7) Steel rule

Cutting tools:

- 1) Hack saw
- 2) Pipe cutter
- 3) Files
- 4) Reamer

- 5) Chisel
- 6) Panga
- 7) Die stock treading machine

Q12. Answer

It is designed to allow quick and convenient connection or disconnection of pipes for maintenance or fixture replacement without disturbing other fittings.

Q13. Answer

- 1) use of hydraulic press bender
- 2) use of heat bending method
- 3) use of bending spring
- 4) use of hand method

14. Answer

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Figure (a): Pipe vice

Pipe vice holds pipe for other operations being performed such as cutting, threading etc.

Figure (b): Tee fitting

The tee fitting is used to make branches at 90° angles to the main pipe.

15/ answers

1) Strength of pipe

2) water carrying capacity

3) life and durability of pipe

4) expenditure on transportation

5) joining process, maintenance and repair

16.	Pipe size (inches)	wrench size (inches)
	$\frac{3}{4}$	8
	2	18
	$2\frac{1}{2}$	24
	1	10

17. Answers:

1) Cast iron pipes

2) Vitrified clay pipe

3) Pre-cast concrete pipes

4) Plastic pipes

5) Asbestos pipe

6) Pitch fiber pipes

7) DWN - Copper pipes

8) Lead pipe

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18. Answer

- 19 The number of visitors that stay in the family
- 29 The number of bathrooms in the house
- 39 The number of people living in the house
- 49 Teenagers of in the family
- 59 Appliance - washing machine
- dish washers
- 69 Pod
- 79 Location of water heater
- 89 water carrying capacity
- 89 water pressure which is needed
- 109 water demand
- 119 wall thickness and strength
- 129 distance and method of supply
- 139 Types of pipe
- 149 type of water heater

B) 80 sec \rightarrow 10 l

1 sec \rightarrow $\frac{10 \text{ l} \times}{80 \text{ sec}}$

1 min (60 sec) \rightarrow $\frac{10 \text{ l} \times 60 \text{ sec}}{80 \text{ sec}} = 7.5 \text{ l}$

The flow rate is 7.5 l per minutes

or Given: $t = 80 \text{ sec}$

Vol = 10 l

Requirement: $Q = ?$ in l/min

Formula = $Q = \frac{\text{Vol}}{t}$

80 sec = 1.33 min

$Q = \frac{10 \text{ l}}{1.33 \text{ min}} = 7.5 \text{ l/min}$

22. A Competent ~~plumber~~ should be able to

- 1) work safely at all time
- 2) Plan the job and agree a schedule of work
- 3) Prepare the work location and materials
- 4) Mark out, measure and mark out the installation requirement
- 5) Fabricate and fix systems components,
- 6) testing systems
- 7) service and maintain system components
- 8) work effectively with customers
- 9) work in a good environment
- 10) promote the products and services the plumbing business.

Q25: Copper pipes and tubes comes in variety to types with different wall thickness copper pipes comes in four types:

- Type K; Has thickest wall ^{and} is the most used for underground services line in the supply system, it is identified with green marking.
- Type L; is used for interior hot and cold supply lines, it may be hard or soft timber and it is marked with blue along the pipe or tube
- Type M; is the thinnest for the type, is also used for interior hot and cold water supply line in residential plumbing. It is identified with red marking along the pipe

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Typ. D.W.V. : Are used for the drains ~~with~~
and for the vent system above ground
only and is identified by yellow
marking.