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Q 1 :-

Importance of various types of drawing construction:-

(i) Architectural drawings:-

⇒ These drawings provide basic idea of the building in design form with multi-dimensional virtual presentation.

⇒ Major components of house architecture drawing are rooms, stores, dining room, bathrooms, kitchen, TV lounge, stairs etc.

(ii) Structural drawings:-

⇒ These drawings are based on final architectural drawings which mainly show internal details of the buildings.

⇒ These internal detail

may include reinforcement for RCC buildings, flooring details, roots detail etc.

⇒ Main purpose of design building structurally means that the behavior of the building under the worst possible loads is studied -

(iii) Plumbing drawings!

⇒ These drawings are the public health showing water supply system and sewerage system of the building indicating the placement of line. e.g GI, RCC etc.

⇒ In water supply drawings hot water and cold water lines are shown with location of geysers, taps, showers etc.

⇒ In sewerage drawings, lines for waste water -

(iv) Electrical drawings:-

⇒ These drawings show how the wiring is placed in building elements and indicating the position of fittings and fixtures switches, sockets, lights fans etc.

⇒ Moreover call bell system, fire-alarm system, CCTV system etc are included-

(v) Air-Conditioning (HVAC) drawings:-

⇒ These drawings are developed for the building with centrally air conditioning system.

⇒ Placement of fresh air ducts and chilled air pipes is mentioned which helps to leave provision in structural elements and wall etc.

(vi) Civil Engineering drawings:-

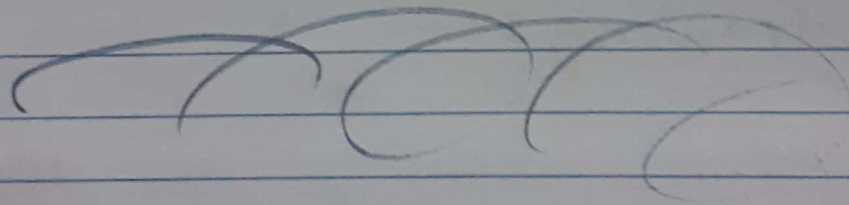
A schematic representation of a building object, or components made according to defined conventions and projected to serve in the construction or fabrication.

(vii) Detail drawing:-

(viii) AS-built drawing:-

(ix) Shop-drawing.

(x) working drawing.



Q = 21 -

Structural drawings
& construction of multi
storey buildings:-

Structural drawings:-

Those technical drawings which mainly show the internal details of a structure or building.

These internal details maybe about reinforcement detail for RCC structure, floor internal detail, roof internal details, stairs detailed internal detail etc.

→ These drawings are developed by civil/structure engineer.

For example, In case of reinforcement detail the drawing may include the following -

- # Bar number & types
- # Bend shape -
- # Center to center Spacing
between bars -
- # Lap length.
- # Joint details.
- # minimum clear cover
and grade of reinforcement -

The structural drawings
set has different subsets

- ⇒ General Notes.
- ⇒ Location Plan.
- ⇒ Site detailed Plan.
- ⇒ Floor Plan.
- ⇒ Elevation Plan -
Section.

General Notes:-

General notes are parts of structural drawings and they cover the code used in design and the by-laws of buildings. Typically no detail on these drawings.

Location Plan:-

A location plan provides location details of the proposed development in its surrounding context. This enables the planning authority to properly facility will be constructed.

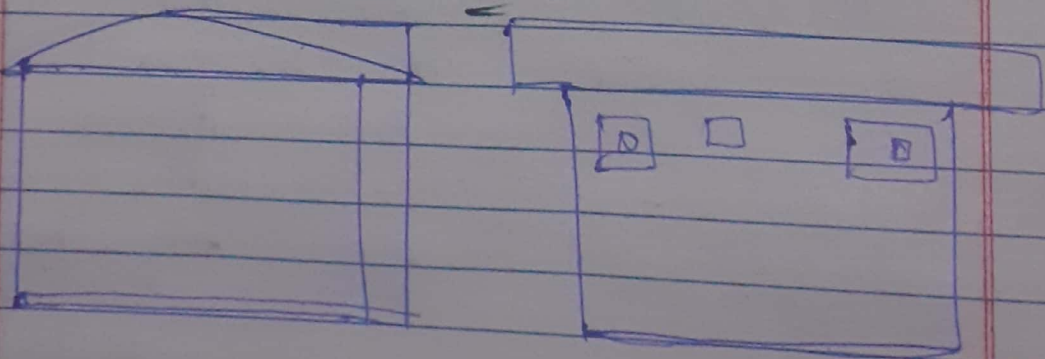
Site Plan:-

A site plan is a diagram that shows the layout of a proposed building. A site plan may include the location and details of different components of a buildings and structure -

Examples:-

Rooms, kitchen, TV lounge etc

Elevation views:-



Elevation :-

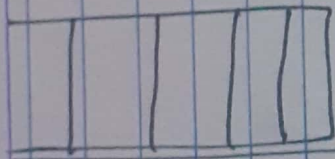
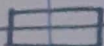
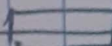
Show the exterior walls of a building or structure. In elevation drawing you can find the height of building & structure properties of element present in the walls.

Section:-

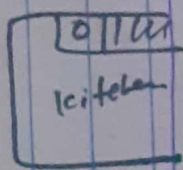
Section plan show are referenced in the plan view drawings and provide information about elements that cannot be seen in plan drawings.

15x16
Room

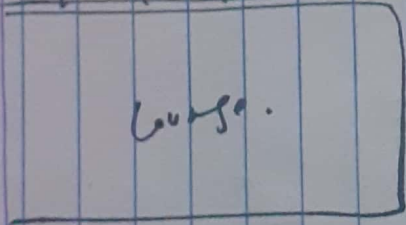
15x16
Room



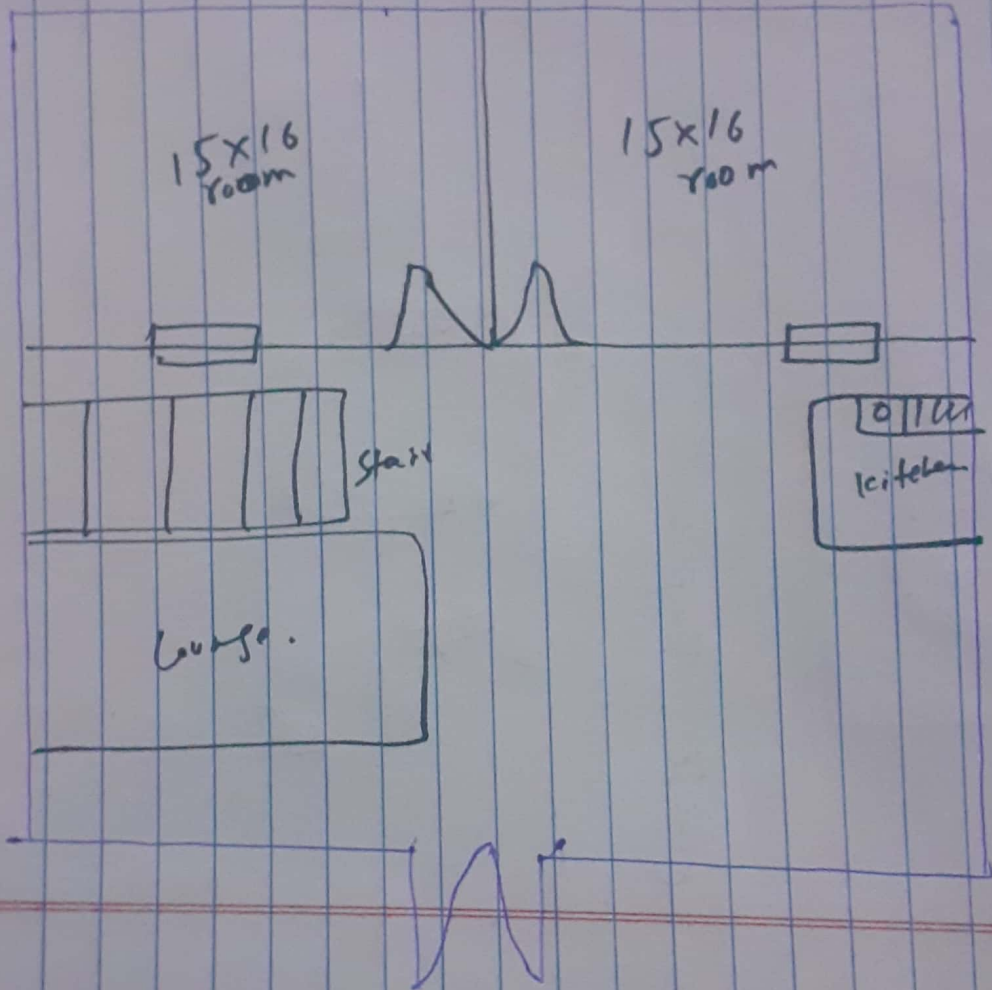
Stair



Dapur
Kitchen



Lounge.



Floor Plan

Bubur Paper Products

Q = 3 :-

Various Components of plumbing drawing :-

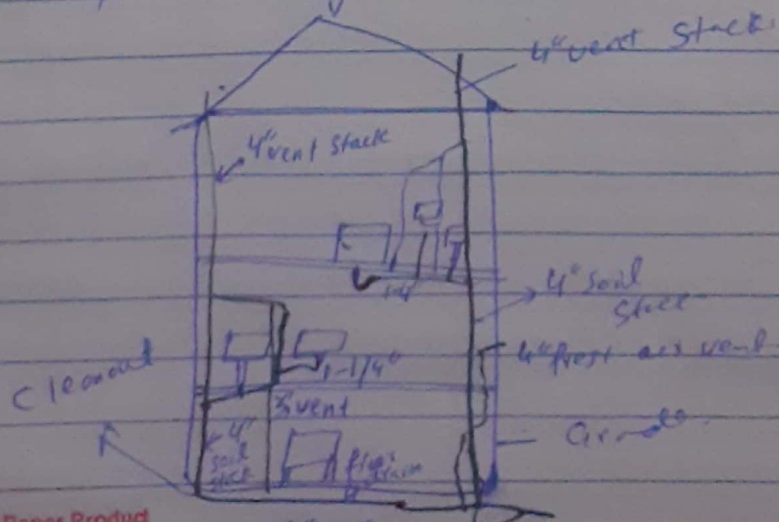
Plumbing drawings :-

These drawings show water supply and sewage system of any building indicating the placement of pipe line :-

(e.g) (GI, UPVC & PVC etc)

There are three principal parts of plumbing system :-

- (i) Water supply system.
- (ii) wastewater and waste removal system.
- (iii) Plumbing fixtures.



Wastewater & waste water removal:

wastewater and other water are carried to the Sanitary Sewer or Septic tank through the waste removal system

⇒ These pipes are isolated from the water supply system and must be sized for sufficient capacity.

⇒ The drainage system is not under pressure and depends on gravity to carry the waste into the sewer.

⇒ Every house must have at least one main stack which is generally 3" in diameter.

⇒ Each bathroom must have a main stack.

⇒ Secondary stacks are 1 1/2" diameter.

Gases from the system dissipate through the vent stack - 12" above roof.

Each stack requires a cleanout at the base.

Traps:-

The traps most commonly used with plumbing fixtures is the p-trap.

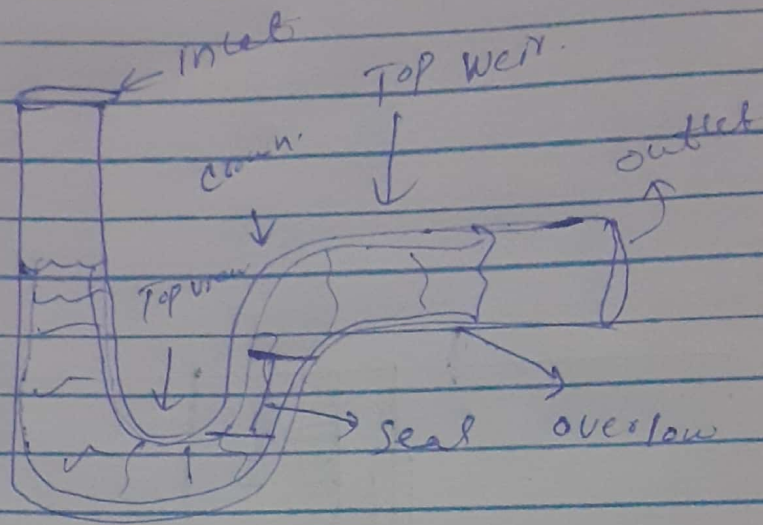
The term trap seal refers to the water being held in the bent portion of a fixture trap.

House traps:-

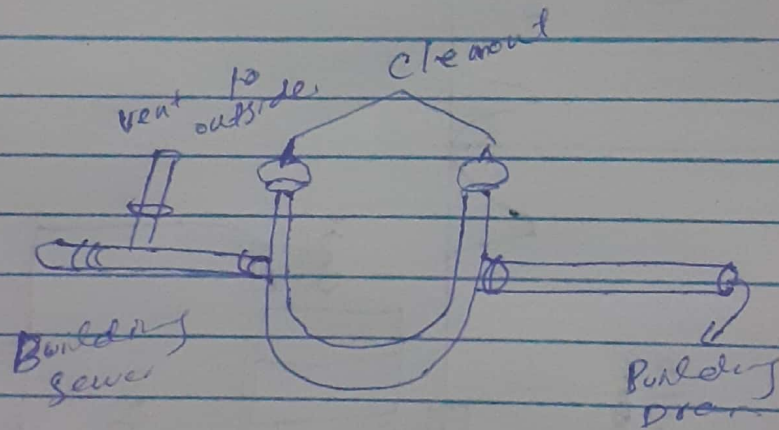
Building traps are provided in the main building sewer.

It shall be provided with a cleanout and shall have a vent or fresh air intake.

Traps:-



House Trap:-



Soil Stacks & waste Stacks.

A Soil Stack is a vertical drain pipe that carries soil waste from sanitary unit.

A waste Stack is any other vertical drain pipe that doesn't carry soil from a sanitary fixture.

Plumbing Cleanout:-

A plumbing cleanout is a cleanout fitting with a removable plug used in wastewater system.

Cleanouts are usually placed at the connection point b/w sewer lines & drain lines the base located vertical stack.

Plumbing Air vents:-

Drain pipes remove water and waste from a building. The plumbing vent pipe also known as plumbing air vents.

Riser Diagram:-

Riser diagram are used as supplementary details in order to show more clearly how to plumbing system in to be installed.

Plumbing Plan:-

The plumbing plan is a plan view that show the complete plumbing system. The plumbing plan show the location, size, and type of all plumbing fixtures, pipes etc.

The plumbing plan should include:-

waste line & vent stacks
 Drain & plumbing fixture location
 size & type of pipe to used
 A plumbing fixture schedule
 Symbols legend
 General notes