Name: Mudassir Khan

I.D: 7890

Section: A

Subject: Enginering drawing & graphic Theory.

Teacher: Engr: Nadeem Shaib

Depth: B.S(C) Engg

Date: 26/9/2020

(2)

Q1 What is the various component of plumbing System of building? What precautions should be ensured in provision of plumbing system of a multi-story residential building?

Ans: Plumbing:- The word "plumbing" comes from the Latin word plumbum for Lead, as pipes were once made from Lead.

⇒ plumbing is the system of pipes, drains, fittings, valves, valves assemblies and devises installed in a building for the distribution of water for drinking, heating and washing and the removal of water borne wastes and

The Skilled trade of working with pipes, tubing & plumbing fixtures in such System.

→ The art & Science of Creating & maintaining Sainatary Conditions in building used by humans.

→ A basic plumbing System is Consist of Three parts: pipes and fitting, fixtures, and drainage.

Together They Combine to creat a functional plumbing System.

That Serves a variety of used in The home.

→ Pipes & fitting are the backbone on which all plumbing System are baidt.

→ pipes in a basic plumbing System will Connect to a variety of plumbing System.

Just as pipes Connect the fixtures to the main water Supplies. drainage Systems are the Components of basic plumbing System that Connect the various fixtures to the waste removal line and eventually the Sewage System.

Precautions of Plumbing System for multi Story residential Building:-

⇒ Designing plumbing Systems for multiple dwellings and multi-story housing units requires Careful attention to factors that are Substantially more Complicated than those for Single Story building/ dwellings.

Increasing Water pressure for Multi story Building:

In multi story buildings water pressure will often need to be increased to ensure that water is reaching the upper Level of the Structure.

This can be accomplished in several different ways.

* **Installation of booster pump:-**
Series of staged pumps or variable speed pumps can be installed to provide increased pressure for water drawn from the municipal water supply or from gravity storage tank.

* **using a gravity-based roof tank:-**
Water is pumped from ground level / basement Level storage tank into a roof tank that attains adequate water pressure through gravity.

* use of hydro-pneumatic Storage tanks:-

Water is pumped from municipal Supply lines in to hydro-pneumatic Storage tank.

* Avoidance of Cross-Contamination:-

Multi-occupancy must have Plumbing System designs That prevent The possibility of Cross-Contimination of drinking water from one dwelling to another.

* ~~Avoidance of~~

* Installation of Control valves:-

Multi-dwelling units Should have Control valve Installed to Control Water Supplies to each Individual unit.

→ drainage System Should be equpped with Liquid Seal traps.

→ All drains Should be adequately Ventilated.

→ deterious Substances Should be excluded from Sewers.

→ Back flow of Sewage Should be prevented.

→ Plumbing Installation Should be tested and disinifected before being put into Service

→ Adequate traning Should be provided for plumbing proyessionals and The public Should be made aware of The dangers of poor plumbing.

→ Water Supplied for human Consumption Should be Safe at all times.

→ Every building Should have an internal drinking-water piped System.

Q3 What is the Importance of using Symbols / Connection for Sewerage And electrical system used in building.?

Ans:- A Symbols is Some Thing That Someone intends to Stand for Some thing other Than itself. A Symbol is Some Thing That represent Some thing else by association, resemblance or Convention.

It does not have to be an image.

However we will be looking at one form of Symbol In particular. / a two dimensional design, drawing, picture / sketch That is used to represent another Thing.

Some are so Common place That We take Them for granted.

⇒ Symbols, used in Combination With text and Images. Can make messages more meaningful and memorable Than text alone and have been used throughout the history for marketing and design.

They have the power to cross language barriers and can help you engage with your audience on a deeper level Then is possible with just Word.

Symbols Can help to:

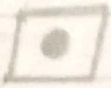
→ assit Inclusion
→ provide a means of Communication.
→ help with Conceptual understanding
→ Promote greater Independence.
→ develope emotional Security.
→ help to provide Structur & routine.
→ Instill Confidence.
→ help Individuals Cope With Change.

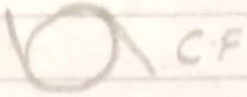
Electrical Symbols

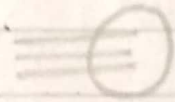
(10)

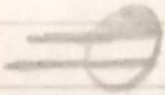
Electrical Switch box :→ 

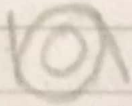
Telephone Jack :→ 

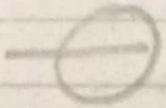
Doorbell Push button → 

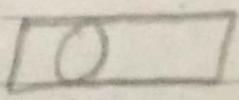
Ceiling Fan → 

Receptacle 240 volt → 

Switched Receptacle → 

Combination Light & Fan → 

Single plex Receptacle → 

Fluorecent light fixture → 

Sewerage Symbols :-

Water Closet →

Water Closet Wall →

Water Closet Low Tank →

Bath → CR

LAVATORY Wall →

Electric Water Cooler →

LAVATORY Corner →

URINAL WALL Type →

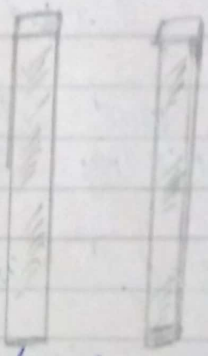
Q3: Briefly describe various Component of Frame Structure along with diagram ?

Ans:- Components of Framed building Structure :→

This building has ground floor, first floor, Second floor and Terrace floor.

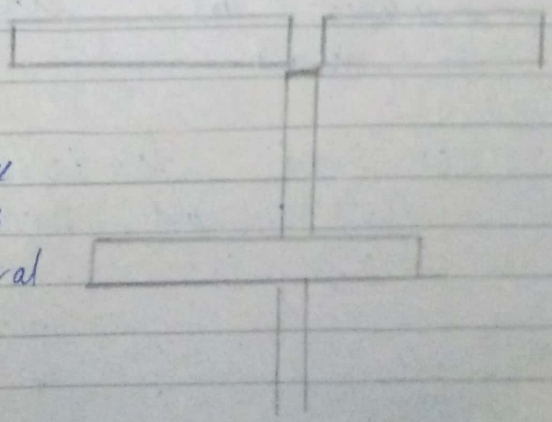
⇒ The Vertical elements are the Coulmns.

⇒ It is vertical member along which beams & Slab/ roof is Supported They are Square & Circular in Shape in C/s.



⇒ The Horizantal element/ bards are the beams.

Beams



They are generally 20, 39, 45, 60cm thick & deep members as per Structural design.

⇒ The flat surface on which you can stand is the slab.

⇒ Walls, windows are added later to give protection to inhabitants.

The load such as Human beings, furniture etc. is carried by this frame.

The wall have no role except protecting the inhabitants from weather.

Door and Windows:- A door provides a connecting link b/w rooms, allowing easy free movment in the building.

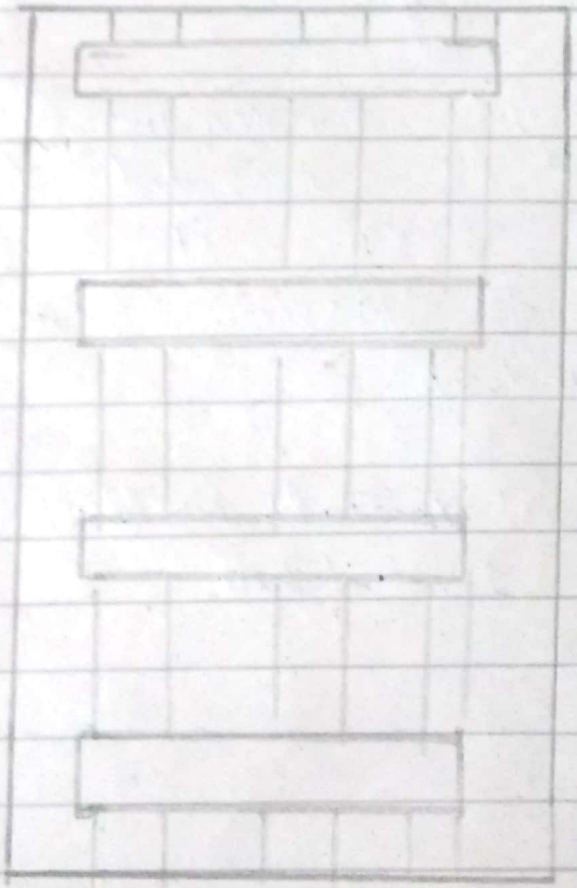
⇒ Window are opening provided in walls.

Door and Window provide lighting and ventilation.

=) They Provide resistance to Weather, Sound, and heat.

=) They provid Security and Privacy.

Battened & Ledge Door:-



Steps And Stair :- steps and stairs

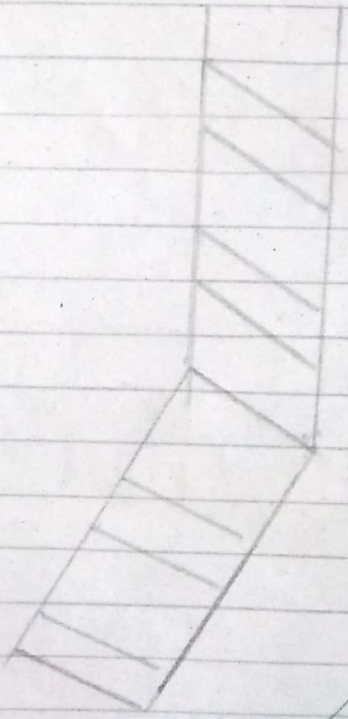
are meant to provide access b/w different levels.

Stair should be properly located to provide essy acess and fast Serivices To The building.

In one flight maximum 8 steps should be provided for more Than 8 steps it is recomended to provide Them with Ged. Landing.

- Generally in residential building width of Stair is 1.0 – 1.2 m

Steps & Stairs :



Q4 What is the Importance and Characteristics of damp proof Course ?

Ans: Damp proof Course :-

A Damp proof Course is a horizontal barrier in a wall designed to resist moisture rising through the Structure by Capillary action.

a phenamenon is known as Damp proof Course.

It is used to stop dampness in a building.

→ due to Capillary movement of water, water rises from the earth to the building.

→ passing Through the foundation

It rises higher to reach the walls.

Importance of DPC

the importance of Damp Proofing Buildings
-Damp problems are one of the most
recurrent issues Affecting buildings &
Protection of a building starts in its most
Basic contruction. its easiest to prevent rising
damp then it is to treat it & this is
where damp proofing come in. they are moisture
Controle treatments Applied to the walls.
& Floors of buildings to prevent damp
proofing is not administred adequately,
there will be very little Protection for
the walls & floors of buildings. against
damp.
When it comes to internal bueling problems.
damp is one to the most frequent that we
have deal with, regardless of Wheather the
building is Commercial or residential. with
rising damp, its alway easier to prevent than
it is to treat, which is why damp proof is
so necessary. if damp proofing is not
installed properly, or not at all, there will be
little to no protection for the walls and floor
Ultimately this load to mould, damp patches
on the walls, stains, wet rot, peeling wallpaper
& musty smells, all of which we'd certainly
like to avoid.

Characteristics of EPDM damp proof course membrane lend itself prefe—

- Exceptional construction and expansion characteristics with up to 400% elongation.
- temperature stable from −40°C to +120°C
- Superior resistance to weathering, Ozone & ultra violet.
- Excellent Chemical resistance
- will not discolour masonry.
- life Expectancy of over 40 years
- Compatible with a wide rang of Substrates.
- Contains no enviromental Pollutants.