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Section 'B'

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Subject Waste Water Engineering

Assignment # 02

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Briefly describe ;

(1) Soil Pipes and anti-syphon pipes .

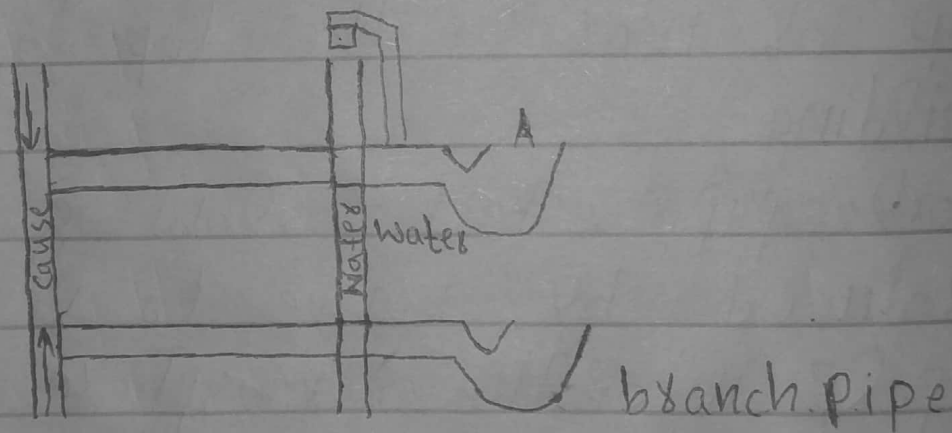
- A soil pipe is used for solid water .
- This type of pipe will carry water and solids into the sewer .
- Soil pipes are vented high at the top or near to the top of a building .
- Soil pipe stack allow gases produced by waste to vent safely into the atmosphere .

→ Anti-syphon Pipes ;

An extra pipes connected to the outlets of toilets . Seats of all the floors the other end of which is exposed to atmosphere is called anti-syphonage

Pipe .

- The difference of air pressure causes the water seal in the toilet seat to get sucked out into the pipe, thus seal is broken and gases can enter into the toilet.
- Water seal of traps in the multi-story building or house may sometimes get broken due to siphonic action.



Anti-siphonic Pipe

(2) Sanitary Fixture ;

Sanitary fixture is a respectable for Industrial in and fesal sewage that is installed in houses and public and Industrial building.

Sanitary fixture is attached to the interior system of water pipes and Sewerage system for constitute the main element of a building constoxy engineering equipment.

It is installed in different areas of bathtubs wash hand, shower pumps traps and bidet are installed in bathrooms, Washrooms and Shower rooms.

Traps ; Traps catch water after each discharge from a fixture so as not to allow up upleament and obnoxious gases in a sanitary drainage system to escape through the fixture.

All the fixtures are to be provide with its own drop trap except for the laundry and kitchen sinks connected to a single trap

Types of trap.

Depending upon the shape the trap are classified as ;

P-trap

Q-trap

S-trap

In depth of trap seal depend upon usage of a pipe. The trap seal varies from 25 to 75 mm deep.

(3) Cross Connection and back siphonage control.

Cross Connections ;

When drinking water piping connects to various plumbing fixtures or water utilizing equipment a cross connection is created. If improperly protected, contamination can result when a back flow event occurs ; allowing contamination to reverse flow from the fixture/ equipment back into the drinking water piping.

Any actual or potential connection between the water works and any source of pollution, contamination or other material or substance that could change the quality of water in a drinking water supply.

Back syphonage control;

The flow of water or other liquids, mixtures or substances into the distributing pipes of potable water supply from any source or source other than the intended source.

Back siphonage is one type of back flow. Drain - Any pipe that carries waste water or waterborne waste in a building (house) drainage system.

The flowing back of used contaminated, or polluted water from a plumbing fixture or vessel into a potable water supply because of negative pressure in the pipe.