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## Sessional Assignment Wastewater Engineering

Briefly describe the following terms.

- 1) Soil pipes and anti-siphon pipes
- 2) Sanitary fixtures and traps
- 3) Cross connections and back siphonage control.

1) Soil Pipe:

A Soil pipe is for solid waste. This type of pipe will carry water and solids into the sewer. While any pipe could physically perform the task the soil pipe also known as a soil vent pipe as installed in most homes has a specific quality. First it is of a dimension to allow solid waste to pass. Second it is vented in a very specific way to maintain a safe environment and reduce odours.

ANTI-SYPHON PIPES:

An extra pipe connected to the outlets of toilet seats of all the floors - the other end of which is exposed to atmosphere is anti siphonage pipe. These are provided to maintain water seal so

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that foul gases of the sewer line do not find entry in to the toilet / bathrooms.

## 2.) SANITARY FIXTURES AND TRAPS:

In plumbing, a trap is a device shaped with a bending pipe path to retain fluid to prevent sewer gases from entering building while allowing waste material to pass through. In oil refineries, traps are used to prevent hydrocarbons and other dangerous gases and chemical fumes from escaping through drains. In domestic application traps are typically U, S, Q or J shaped pipe located below or within a plumbing fixture. An S shaped trap is also known as an S bend following the introduction of the U shaped trap. The U bend could not jam so unlike the S bend it did not need an overflow. The most common of these traps is referred to as a P trap. In the addition of a 90 degree fitting on the outlet side of a U bend thereby creating a P like shape (oriented horizontally). It is also referred to as a

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Sink trap because it is installed under most sinks.

2) CROSS CONNECTION:

A Cross-Connection is any temporary or permanent connection between a public water system or consumer potable (i.e. drinking) water system and a source or system containing non-potable water or other substances. An example is the piping between a public water system or consumer's potable water system cooling system or irrigation system.

BACK-SIPHONAGE CONTROL:

Back-siphonage is backflow caused by a negative pressure in a public water system. The effect is similar to drinking water through a straw.

A backflow prevention device is used to protect potable water supplies from contamination or pollution due to backflow. In water distribution system water is normally maintained at a significant pressure to enable water to flow from the tap, shower, or other fixture.