

**Assignment – 1**  
**Quality and Quantity of Water**

Q-1	Explain various impurities present in water and discuss how to remove it
Q-2	Write Indian standard for drinking water (IS:10500-2012)
Q-3	Discuss the Water (prevention and control of pollution) Act – 1974
Q-4	Explain the growth and food utilization of microbes
Q-5	What is per capita demand? Calculate the total water requirement of a city having population 500000. Assume suitable per capita demand. Also calculate fire demand using Kuichling's formula
Q-6	What is hard water? Explain the types of hardness and discuss how to remove it.

**Assignment – 2**  
**Characteristics of Waste Water**

Q-1	What is BOD? Derive the first order BOD equation $y_t = y_0 (1 - e^{-kt})$
Q-2	$BOD_5 = 150$ mg/l at $20^\circ\text{C}$ . Find 1) $BOD_8$ at $15^\circ\text{C}$ & 2) $BOD_3$ at $25^\circ\text{C}$ . Take value of $\theta = 1.047$ and $K = 0.23\text{d}^{-1}$
Q-3	Explain the self-purification processes of natural stream
Q-4	Explain the D.O. sag curve

**Assignment - 3**  
**House Drainage**

Q-1	Define the following terms: (a) Wastewater (b) Sewage (c) Sullage (d) Sewer (d) Soil pipe (e) waste pipe (f) Sewerage system (g) Traps
Q-2	Draw neat sketch and describe the following traps (i) Nalni trap (ii) Gully trap (iii) Intercepting trap (iv) Traps depending upon shapes.
Q-3	Describe the single pipe system and two pipe system of plumbing with sketches.
Q-4	Describe principles of house drainage system with one typical House drainage plan.
Q-5	State the different components of house drainage system and describe Pipes and Sanitary fittings.

**Assignment – 4**  
**Air Pollution, Noise Pollution**

Q-1	Define air pollution. Explain Indian Ambient air quality standards.
Q-2	Describe different sources of air pollution.
Q-3	Describe different air pollutants and their effects on Human and animals.
Q-4	Describe the devices used for control of air pollution.
Q-5	What is noise pollution? How is it measured? Describe some effects their control measures required to control noise pollution.
Q-6	Which are the common sources of noise pollution.
Q-7	Give the standards of acceptable noise level in different zones as per the IS standards.
Q-8	State the effects of noise pollution and different control measures for noise pollution.

**Assignment-5**  
**The Environmental Acts**

Q-1	What are the steps taken for prevent and control Environmental Pollution, Under EPA, 1986?
Q-2	What are the functions of state board under Air act, 1981?
	Write short note on (i) Environmental Audit, (ii) Environmental Impact Assessment (EIA),

**Note:**

1. Assignments given in the laboratory is to be added with these questions. Neglect repeating questions which are already given in laboratory.