

T.E. Civil VI CBSGS
Env. Engg - I
(3 Hours)

2012-16
QP Code : 577701

12

[Total Marks : 80

- N.B. :**
- 1) Question **number one** is **compulsory**.
 - 2) Attempt **any three** of remaining **five** questions.
 - 3) Assume **suitable** data if **required**.
 - 4) Draw **neat sketches** wherever **necessary**.

1. Solve **any four** 20
 - A. Give the requirement of good water meter.
 - B. Explain the formation of monochloramine, dichloramine and trichloramine.
 - C. What are the factors affecting location of intake structure.
 - D. Explain how the turbidity affects the disinfection process
 - E. What is transfer station? Why it is required.

2.
 - A. Draw the neat sketch of municipal water connection and explain all the component. 8
 - B. Explain the significance of good water supply scheme. 6
 - C. What are the characteristics of hazardous waste. 6

3.
 - A. Design a sedimentation tank to treat 8 MLD of water. Assume flow rate 600lit/hr and detention time 5hrs, velocity of flow 0.25m/minute 8
 - B. What are the methods of water softening? Explain any one method. 6
 - C. Explain the functional element of solid waste management. 6

4.
 - A. What are the operational troubles in rapid sand filter? What is negative head? 8
 - B. Explain different coagulant used in water treatment. 6
 - C. What are the different methods of volume reduction in solid waste. 6

5.
 - A. Draw a neat sketch of water treatment plant and explain it's functioning. 8
 - B. Explain how colour and odour present in water are measured. 6
 - C. Chlorine usage in the treatment of 25000m³/day of water is 10 kg/day. The residual chlorine after 20 minutes contact time is 0.2mg/lit. calculate dose of chlorine and chlorine demand of water. 6

6.
 - A. What are the water borne diseases explain in brief 6
 - B. Differentiate between rapid and slow sand filter 6
 - C. Explain leachate collection and it's management in landfill. 8