



Reg. No. : .....

Name : .....

**Seventh Semester B.Tech. Degree Examination, October 2011  
(2008 Scheme)**

**08.704 : ENVIRONMENTAL ENGINEERING – I (C)**

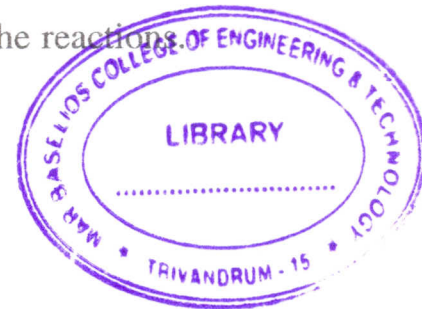
Time : 3 Hours

Max. Marks : 100

**Instruction :** Answer *all* questions. Assume suitable data wherever necessary.

**PART – A**

1. Explain residential demand of water and how it is arrived at ?
2. Write short notes on hardness of water.
3. Give a short note on the materials used for conveying water.
4. Why is alum commonly used as a coagulant ? Write down the reactions.
5. Give the design criteria of a flocculator.
6. Explain the backwashing process of a rapid sand filter.
7. Explain the process of electro dialysis.
8. Explain the break through curve of adsorption.



**(5×8=40 Marks)**

**PART – B  
Module – I**

9. Explain the different methods that can be used for population forecasting. **20**

**OR**

10. Explain the different water quality parameters and discuss the significance of each. **20**

**P.T.O.**

**Module – II**

11. Describe the different types of settling of particles in a suspension. 20

OR

12. Design a rapid sand filter for treating a water flow of 4 Mld with proper sketches. 20

**Module – III**

13. Explain the disinfecting actions of chlorine in water. Discuss the significance of 'break point chlorination' and 'chlorine demand' in relation to disinfection process. 20

OR

14. a) Explain Hardy Cross method of analysis of network of pipes. 10

b) Explain ion exchange method of water treatment. 10

