

Q.P. Code : 6420

(3 Hours)

[Total Marks : 80]

Note: 1) Question No. 1 is compulsory

2) Attempt any three Questions from remaining five.

- Q.1 a) Explain the necessity of planned water supply scheme. (20)
- b) what is turbidity? How it is measured and give it's unit.
- c) what are the factors affecting sedimentation process?
- d) What are the factors affecting location of intake structure.
- Q.2 a) Explain the advantages of radial water distribution system. (05)
- b) Draw the layout of water treatment plant and explain function of each unit. (10)
- c) Write a short note on tube settlers. (05)
- Q.3 a) Explain the various disinfectants used in water treatment. (10)
- b) The maximum daily demand of water treatment plant has estimated as 9MLD. Design a suitable sedimentation tank assuming detention period of 4hrs and velocity of flow 25 cm/min. (10)
- Q.4 a) what are the factors affecting composting process. (08)
- b) Explain the operational troubles in rapid sand filter. (08)
- c) Explain zeta potential. (04)
- Q.5 a) Explain testing of water pipeline. (04)
- b) Explain any one method of hardness removal. (06)
- c) Design a rapid sand filter for 4MLD water supply with it's principal components. (10)
- Q.6 a) What is leachate? How leachate movement is controlled in landfill. (08)
- b) Explain the characteristics of hazardous waste. (06)
- c) Give the various coagulant used in water treatment. (06)