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Reg. No. : .....

Name : .....

Eighth Semester B.Tech. Degree Examination, December 2017
(2008 Scheme)
08.807.3 (Elective – V) : INDUSTRIAL WASTE WATER MANAGEMENT (C)

Time : 3 Hours Max. Marks : 100

Instructions : *1) Answer **all** questions in Part – **A** and as per choice in Part – **B**.*
*2) Assume **any** missing data **suitably**.*

PART – A

1. Calculate the population equivalent of a city given.
   i) The average sewage from the city is 95×10^6 1/day and
   ii) The average 5 day BOD is 300 mg/l.
2. Explain oxygen deficit curve.
3. Discuss the types of process for neutralization and equalization.
4. Explain reverse osmosis process with its advantage and its application.
5. Explain the factors determine the rate of filtration for a given filter application.
6. Write the applications of membrane technologies in waste water treatment.
7. Write short notes on distillery wastes.
8. Explain the effect of waste in streams. **(8×5=40 Marks)**

PART – B

Module – I

9. Discuss about the following physical, chemical and biological characteristics of waste water. **20**

OR

10. If the value of $(BOD)_5$ at 30°C is 200 ppm then, what will be the $(BOD)_{10}$ at 40°C. Take K_D at 37°C as 0.16/day. **20**

P.T.O.

Module – II

11. Describe the screening, grit removal and flocculation processes used in waste water treatment. **20**

OR

12. Explain the sedimentation process used in the industrial waste treatment and the design of sedimentation vessels. **20**

Module – III

13. Discuss the current treatment technologies for waste water from paper and pulp industries. **20**

OR

14. Explain the removal of inorganic dissolved solids by Dialysis and ion exchange. **20**

(3×20=60 Marks)