

15848 A

Name:

Reg.No.

EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, JUNE 2011

CE 04 803 - ENVIRONMENTAL ENGINEERING - II

Time: 3 Hours

Maximum: 100 Marks

(Answer All Questions)

1.
 - a. What is the function of trap and list out the requirements of good trap?
 - b. Discuss the comparative merits and demerits of separate system and combined system.
 - c. A wastewater flow of 10000 m³/day is received at a sewage treatment plant. The population served is 40000 and there a few industries in addition. If the BOD₅ of the wastewater is 400 mg/l, estimate the BOD load (kg/day) due to (1) domestic sewage (2) Industries.
 - d. Explain the theory of sedimentation and types of settling in detail.
 - e. What do you understand by self purification property of a stream? Explain the factors affecting this property.
 - f. Explain vacuum filtration method of dewatering sludge.
 - g. List the elements (in the form of flowchart) of a solid waste management system and explain various environmental issues associated with open dumping of municipal solid waste?
 - h. Explain the classification and sources of air pollutants.

(8 x 5 = 40 Marks)

2.
 - a. Draw a neat sketch of a typical sewage pumping station, showing all necessary components, and describe in brief the functions of each.

OR

- b. Explain the various principles that should be kept in mind while designing a house drainage system. Also explain the tests, which can be conducted in house drainage system.
3.
 - a. Draw the schematic diagram of a wastewater treatment facility providing primary and secondary treatment. Indicate the purpose of different units.

OR

- b. Explain in detail the operational troubles and preventive measures encountered in a Activated sludge process
4.
 - a. Mention the various methods of wastewater disposal. Discuss their merits and

demerits. Explain the conditions favorable for their adoption.

OR

- b. Design a septic tank for a small residential colony having a population of 500 persons. The rate of water supply is 150 lpcd. Assume suitable data.
5. a. Explain the composting process and anaerobic processing of solid waste in detail.

OR

- b. Briefly explain the methods of controlling air pollutant emissions at the source

(4 x 15 = 60 Marks)