

S - 953

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**T.E. (Civil) (Part - II) (Semester - VI) (New) Examination, Dec. - 2013**

**ENVIRONMENTAL ENGINEERING - II**

**Sub. Code : 45546**

**Day and Date : Saturday, 28-12-2013**

**Total Marks : 100**

**Time : 10.00 a.m. to 1.00 p.m.**

- Instructions :**
- 1) Que.No.1 & Que No. 5 are compulsory.
  - 2) Attempt any two other questions from each section.
  - 3) Figures to the right indicate full marks.
  - 4) Make assumptions wherever necessary.
  - 5) Use of non-programmable calculator is allowed.

**SECTION - I**

**Q1) Answer ANY THREE of following- [18]**

- a) Sketch, label and explain components of sewage pumping station.
- b) Calculate one day 37°C BOD of sewage sample whose 5 day 20°C BOD is 100mg/l. Assume  $k = 0.1$  at 20°C.
- c) Enumerate at least five disposal standards of waste water on land and in stream.
- d) How waste water is treated using aerated lagoon?

**Q2) a) Explain the importance of primary treatment in waste water treatment plant. [6]**

**b) How the maintenance of sewage system and pumping station is carried out? [6]**

**c) Explain reasons of variation in flow rate of waste water. [4]**

**Q3) a) Explain trickling filter along with its biological process of attached growth. [8]**

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- b) Design an oxidation pond for treating sewage from residential colony of 2000 persons, contributing 130 lit per capita per day. The 5 day BOD of sewage is 250 mg/l. [8]
- Q4) a) Explain DO sag curve in detail. [8]  
b) Explain the modifications of activated sludge process with diagram. [8]

SECTION - II

- Q5) Answer the following questions [20]  
a) Define Solid Waste Management and write the objectives of SWM.  
b) Discuss photochemical smog.  
c) Enumerate effects of Noise Pollution  
d) Write short note on EIA studies.
- Q6) a) Explain the methods of collection of solid waste in a city [8]  
b) Discuss the process of Incineration of solid waste and write its advantages and disadvantages over composting. [7]
- Q7) a) Discuss the effects of air pollution on  
i) Human health [8]  
ii) Plants  
b) Explain the principle and working of Bag filter and write the ambient air quality standards. [7]
- Q8) a) What is noise pollution? How it is measured? Write the Noise level standards. [8]  
b) Explain the various techniques for noise pollution control. [7]

