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## EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION JUNE 2008

## CE 04 803—ENVIRONMENTAL ENGINEERING-II

(2004 admissions)

Time: Three Hours

Maximum: 100 Marks

## Answer all questions.

- 1. (a) What are the factors which are considered while determining the quantity of dry weather flow?
  - (b) Explain the significance of minimum and maximum velocity of flow in the design of sewers?
  - (c) Mention the physical properties of sewage.
  - (d) Mention the purpose, location, cleaning devices and design aspects of screens.
  - (e) Explain the process of drying in drying beds and mention the use of dried sludge.
  - (f) Discuss the methods of disposal of septic tank effluent.
  - (g) Explain the type and sources of solid waste.
  - (h) Discuss the consequences of greenhouse effect.

 $(8 \times 5 = 40 \text{ marks})$ 

2. (a) Discuss the system of sewerage used for sanitation and explain the merits and demerits of the system.

Or

- (b) Why it is necessary to provide sewer appurtenances on the sewer lines? With the help of neat sketches explain the working principle of any three types of sewer appurtenances.
- 3. (a) Explain the test procedure for dissolved oxygen and derive the equation for first stage BOD formulation.

Or

- (b) With the help of neat sketch, explain the Activated Sludge Process.
- 4. (a) Write short notes on:
  - (i) Sludge digestion.
- (ii) Sludge conditioning.

Or

- (b) Describe with neat sketch, the components of a septic tank along with the functions of each.
- 5. (a) Discuss the factors that contribute to variations in composition of solid waste.

Or

(b) Explain the particulate control techniques in detail.

 $(4 \times 15 = 60 \text{ marks})$