

(DCE 414)

B.Tech. DEGREE EXAMINATION, MAY - 2015

(Examination at the end of Final Year)

CIVIL ENGINEERING

Paper - IV : Environmental Engineering - II

Time : 3 Hours

Maximum Marks : 75

Answer question No.1 is compulsory

(15)

Answer ONE question from each unit

(4 × 15 = 60)

- 1) a) Write two differences between sewage & sewerage.
- b) State the factors affecting storm water sewage.
- c) What is meant by inverted syphons.
- d) What is Sullage?
- e) Explain storm water regulators.
- f) State various methods of aeration.
- g) Write the factors affecting sludge digestion.
- h) State the necessity of screens.
- i) What is sludge conditioning?
- j) Write the zones of pollution of river.
- k) What is Incineration?
- l) What is Diffused air system?
- m) Define Man hole.

- n) What is a Grit chamber?
- o) What do you mean by sludge bulking?

UNIT - I

- 2) a) Explain the types of sewers? Write the precautions to be taken while designing of sewers? **(8)**
- b) Write short notes on maintenance of sewers. **(7)**

OR

- 3) a) Write short notes on : **(8)**
 - i) Sanitation. ii) Conservancy.
 - iii) Grease and oil traps. iv) Street inlets.
- b) What are the factors affecting storm water sewage? Explain the determination of quantity of storm water sewage. **(7)**

UNIT - II

- 4) a) What is decomposition of sewage? Explain sulphur cycle of decomposition. **(7)**
- b) What is a septic tank? Explain the design factors to be considered for a septic tank. **(8)**

OR

- 5) a) Explain Grit chamber in detail with a neat sketch? **(8)**
- b) Write about physical and chemical analysis of sewage. **(7)**

UNIT - III

- 6) a) What is organic loading? What are the various parameters for organic loading? **(8)**
- b) Explain in detail about self purification process. **(7)**

OR

- 7) a) Write short notes on : **(8)**
 - i) Trickling filters ii) Sludge bulcking
 - iii) Sewage sickness iv) Disposal by dilution
- b) Write the objectives and methods of sewage disposal. **(7)**

UNIT - IV

- 8) a) What is sludge digestion? Write the stages of sludge digestion and explain each of them. (7)
- b) Write in detail about the qualities and characteristics of solid waste management. (8)

OR

- 9) a) Explain about various methods of sludge disposal. (7)
- b) Write short notes on : (8)
- i) Pyrolysis.
 - ii) Sanitary land fill.
 - iii) Sludge thickening.
 - iv) Characteristics of sewage sludge.

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