Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 71574

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2017.

Fifth Semester

Civil Engineering

CE 6503 — ENVIRONMENTAL ENGINEERING – I

(Regulations 2013)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the methods of population forecasting.

2. State the factors governing the selection of particular water source.

3. What are the advantages and limitations of RCC pipes?

4. Name the various types of pressure pipes.

5. What is known as schmutzdecke or dirty skin?

6. Define alkalinity and fluoridation.

7. Why baffles are provided in the sedimentation tank in sewage treatment?

8. What is sewage sickness and how it can be prevented?

9. What do you meant by prime lake pollutant?

10. What is gyroscopic torque?

PART B — (5 × 16 = 80 marks)

11. (a) (i) List and explain various factors affecting per capita demand of water. (8)

(ii) Write a short note on impurities present in water based on its physical characteristics. (8)

Or

(b) (i) Explain the importance and necessity of planned water supply. (8)

(ii) Explain geometrical increase and incremental increase methods of population forecast with some example count. (8)

12. (a) Explain the causes, effects and prevention methods of pipe corrosion in detail.

Or

(b) (i) Explain the points to be observed in selecting a pump. (8)

(ii) List the requirements of a good piping material. (8)

13. (a) Discuss the design aspects of sedimentation tanks in detail. (16)

Or

(b) (i) Explain the process, requirements and methods of disinfection of water. (8)

(ii) Discuss Chlorination. State its advantages and precautions. Also discuss residual chlorine and chlorine demand. (8)

14. (a) Brief about few recent and possible advancement in water filtration techniques. (16)

Or

(b) Explain all membrane processes in detail. (16)

15. (a) Explain the different layouts of water distribution system and also list the requirements of good water distribution system. (10 + 6)

Or

(b) (i) Explain the different types of plumbing systems available in buildings. (8)

(ii) Explain domestic water supply systems fitted with gravity and pressurized tanks along with required line diagrams. (8)

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