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Question Paper Code : 70058

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

Third Semester

Civil Engineering

CE 3303 — WATER SUPPLY AND WASTEWATER ENGINEERING

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How do you measure pH?
2. Name some water borne diseases.
3. What is the significance of velocity gradient in flash mixer?
4. Define breakpoint chlorination.
5. What are the methods of water distribution?
6. How to identify leakage in pipes?
7. What do you mean by Population equivalent?
8. Mention the factors to be considered while selecting pumps for sewerage system.
9. What is the necessity of recirculation in trickling filter?
10. Define the term sludge age.

PART B — (5 × 13 = 65 marks)

11. (a) Enumerate the various water demands. (13)

Or

- (b) Describe the river intake and canal intake with necessary sketch. (13)

12. (a) Mention the types of aerators. (13)

Or

- (b) Categorize the methods of defluoridation techniques. (13)

13. (a) Elaborate various layouts of distribution network with its merits and demerits. (13)

Or

- (b) (i) Enlist the functions of service reservoir. (6)

- (ii) Sketch house service connection. (7)

14. (a) Classify the materials used for constructing sewer pipes with its pros and cons. (13)

Or

- (b) Discuss the systems of plumbing for drainage with its types in detail. (13)

15. (a) Analyze the working of conventional activated sludge process with flow diagram. (13)

Or

- (b) Assess various stages of sludge digestion process and explain disposal of digested sludge. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Illustrate the sand filters with suitable sketch. (15)

Or

- (b) Summarize the sewer appurtenances with its sketch. (15)