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MAR_APR 2026 SUMMER EXAMINATION

1154 B.Tech. CBCS

Sub. Name: Environmental Engineering-I

Sub. Code: 66237/80765/81002

Day and Date: Saturday ,16-05-2026 **Total Marks: 70**

Time: 02:30 PM To 05:00 PM

Instructions:
1. **All questions are compulsory**
2. **Assume suitable data wherever necessary and mention it boldly**
3. **Figures to the right indicate full marks**
4. **Use Sketches/Diagrams wherever necessary**
5. **Use of scientific calculator and logarithmic table is allowed**

Q1) Attempt all questions. **[12]**

a. Explain meaning and acceptable limits for following water quality parameters i) pH Dissolved Oxygen ii) Hardness iii)Turbidity **[6]**

b. Write a note on incremental increase method of population forecast. **[6]**

Q2) Attempt any Two. **[11]**

a. Design a cascade aerator for treating flow of 10 MLD **[6]**

OR

Design a circular sedimentation tank for a flow of 4.2 MLD, detention period is 4.5 hours & depth of water is 3.3m.

b. Explain the principle and working of Tube settler. **[5]**

Q3) Attempt any Two. **[12]**

a. Draw a flow diagram of a typical ground water treatment plant and explain function of each unit in brief **[8]**

b. What is difference between disinfection and sterilization? Why disinfection is necessary **[4]**

OR

Explain the lime soda method of water softening? What are its advantages and disadvantages

Q4) Attempt all questions **[12]**

a. State the various types of corrosion. Explain cathodic protection for corrosion control in detail. **[12]**

b. What is thrust block? Where is it provided? **[4]**

Q5) Attempt any Two. **[11]**

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a. Explain any two various layouts of water distribution with neat sketch **[7]**

b. Differentiate between gravity, pumped and combined water distribution system with figures **[4]**

OR

What are basic functional and hydraulic requirements of a water distribution system

Q6) Attempt any Two. **[12]**

a. Sketch and explain i) Air valve ii) Sluice valve iii) Non return vale **[6]**

b. Explain the procedure and importance of Leakage and pressure testing of newly laid water mains **[6]**

c. Explain necessity and importance of water audit in water supply system. **[6]**

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -
This Question Paper may be distributed for following Subjects as common code.
सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (101) Bachelor of Engineering (81002) Environmental Engineering-I Part 3 SEM 5
2] (1154) B.Tech. CBCS (80765) Environmental Engineering-I Part 3 SEM 5
3] (101) Bachelor of Engineering (66237) Environmental Engineering-I Part 3 SEM 5

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