SP-137

Total No. of Pages : 2

Seat No.	

T.Y. B.Tech. (Civil Engineering) (Semester - VI) (CBCS)
Examination, November - 2023
ENVIRONMENTAL ENGINEERING - II
Sub. Code : 81517

8743

Day and Date : Thursday, 23 - 11 - 2023 **Total Marks : 70**

Time : 2.30 p.m. to 5.00 p.m.

Instructions :
1) **All Questions are Compulsory.**
2) **Figures to the right indicate full marks.**
3) **Assume suitable data if necessary and state them clearly.**
4) **Answer shall be supported by adequate sketches.**

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SECTION - I

Q1) Solve the following. **[11]**

a) Enumerate the characteristics and sources of municipal wastewater. **[5]**

b) Determine the velocity and discharge for a 150 mm dia. circular sewer, laid with a slope of 1 in 150, when flowing at half depth. Mannings coefficient = 0.012. **[6]**

Q2) Answer any two of the following. **[12]**

a) Draw flow diagram of primary and secondary treatment processes and enlist shortly. **[6]**

b) Explain the biological process in trickling filter. **[6]**

c) Discuss modifications in the activated sludge process. **[6]**

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P.T.O.

Q3) Answer any two of the following. **[12]**

a) Explain sludge thickening methods. **[6]**

b) Give the types, advantages and limitations of waste stabilization pond. **[6]**

c) Write the methods of sludge treatment and mention their purpose. **[6]**

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SECTION - II

Q4) Solve the following. **[11]**

a) Explain DO sag curve in detail. **[5]**

b) Give effluents standards for stream and land disposal as per MPCB and CPCB standards. **[6]**

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Q5) Write short notes on any two: **[12]**

a) Biomedical waste management. **[6]**

b) Composting. **[6]**

c) Pyrolysis **[6]**

Q6) Answer any two of the following. **[12]**

a) Write a short note on plume behavior. **[6]**

b) Write a short note on ozone depletion. **[6]**

c) Explain structure, function of Settling chamber. **[6]**

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