

[5254]-1

B.E. (Civil)

ENVIRONMENTAL ENGINEERING - II

(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Attempt Q1 OR Q2, Q3 OR Q4, Q5 OR Q6 from Section - I and Q7 or Q8, Q9 or Q10, Q11 OR Q 12 from Section - II.*
- 2) Figures to the right indicates full marks.*
- 3) Draw neat figures wherever necessary.*
- 4) Assume necessary data.*
- 5) Use of scientific calculators is allowed.*

SECTION - I

Q1) a) Write short note on sewer material. **[8]**

b) Write procedure to determine BOD and its significance. **[8]**

OR

Q2) a) Write steps in design of sewer. **[8]**

b) Write significance of COD and total solids. **[8]**

Q3) a) Write short note stream purification process. **[8]**

b) Write working principle of screen chamber and write its classification. **[8]**

OR

Q4) a) Write short note on types of screen chamber. **[8]**

b) Write short note on oxygen sag curve. **[8]**

Q5) a) Differentiate between single stage and two stage trickling filter. **[9]**

b) Write short note on activated sludge process. **[9]**

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OR

- Q6)** a) Differentiate between aerobic and anaerobic process for treatment of sewage. [9]
- b) Write short note on rotating biological contractor. [9]

SECTION - II

- Q7)** a) Write advantages and disadvantages for aerated lagoon. [8]
- b) Write advantages and disadvantages for oxidation ditch. [8]

OR

- Q8)** a) Write advantages and disadvantages for facultative pond. [8]
- b) Explain mechanism of removal of impurities in root zone. [8]

- Q9)** a) Write short note septic tank. [8]
- b) Explain different methods of disposal of septic tank effluent. [8]

OR

- Q10)** a) Explain working principle of anaerobic digester and its stages. [8]
- b) Write short note on USABR. [8]

- Q11)** a) Write short note on treatment of sugar industry wastewater. [9]
- b) Write discharge standards for dairy and sugar industry. [9]

OR

- Q12)** a) Write short note neutralization process in industrial wastewater treatment plant. [9]
- b) Enlist different secondary and tertiary treatment units in industrial wastewater treatment. Explain any one process. [9]

