

Roll No.

Total Pages : 3

BT-8/M-20

38044

INDUSTRIAL WASTE WATER TREATMENT

Paper–CE-406-E

Time Allowed : 3 Hours] [Maximum Marks : 100

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT-I

1. (a) Discuss the effects of Industrial waste on Water streams. 10
- (b) What do you understand by sewage? Explain the proper method of its disposal into streams. 10
2. (a) Differentiate between Industrial wastes and municipal waste. 10
- (b) Explain the effects of Industrial wastes on waste water treatment plants. 10

UNIT-II

3. (a) Explain the terms conservation of water and reuse of Waste Water in detail. 10
- (b) How the effects of Industrial effluents are minimized on Waste Water treatment? 10

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4. Discuss about :
- (a) Strength reduction.
 - (b) Volume reduction.
 - (c) Neutralization.
 - (d) Equalization.

UNIT-III

5. (a) Write the Industrial effluents standards for disposal on land for irrigation.
- (i) BOD
 - (ii) pH
 - (iii) Cyanide
 - (iv) Iron as Fe
 - (v) Acidity. 15
- (b) Explain the term population equivalent. 5
6. (a) Discuss the method for calculating population equivalent. 8
- (b) Give the Industrial effluent standards for disposal into inland surface water sources.
- (i) Turbidity
 - (ii) TDS
 - (iii) Mercury
 - (iv) Hardness. 12

UNIT-IV

7. (a) With the help of neat flowsheet explain the working of Textile industry. 10
- (b) What is the word distillery stands for? Explain its working. 10
8. (a) What are the safety measures adopted in nitrogenous fertilizers industry? 5
- (b) Discuss the manufacturing process of pulp and paper industry with neat flow diagram. 15