

320841(20)

B. E. (Eighth Semester) Examination, April-May 2021

(New Scheme)

(Civil Engg. Branch)

INDUSTRIAL WASTE TREATMENT

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Part (a) of each question is compulsory carrying 2 marks. Attempt any two parts from (b), (c) & (d) carrying 7 marks.

Unit-I

1. (a) What do you mean by T.D.S.? 2
- (b) Explain industrial uses of water and their effects on water quality. 7

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- (c) Write the quality parameter of water as per indian standard. 7
- (d) Define Sampling and describe various types of sampling. 7

Unit-II

2. (a) Define Sedimentation. 2
- (b) Explain flow process of waste water treatment. 7
- (c) Compare between slow and rapid sand filter. 7
- (d) Write short notes on : (any two) 7
- (i) Removal of Fe & Mn from water
 - (ii) Sludge treatment & handling
 - (iii) Water pollution control techniques
 - (iv) Organic waste treatment

Unit-III

3. (a) What is Equalization process in industry? 2
- (b) Explain flow and concentration equalization. 7

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- (c) Enlist various treatment methods of Industrial waste describe trickling filter process. 7
- (d) Write the procedure for treatment of industrial waste along with town waste. 7

Unit-IV

4. (a) Define Alkalinity. 2
- (b) Explain D.O. sag cure for a stream. 7
- (c) Describe methods of waste water treatment for following contamination : (any two) 7
- (i) Oil and grease
 - (ii) Metal ion removal
 - (iii) Removal of organic substance

Unit-V

5. (a) Define Pulp. 2
- (b) Write the various waste generated in pulp and paper industries. 7
- (c) Describe waste management of Sugar Mill in brief. 7

(d) Discuss case study of waste management in a fertilizer industries on following basis : 7

- (i) Handling
- (ii) Methods of treatment
- (iii) Precautions
- (iv) Difficulties during treatment