Code No: **R163201D** **R16** SET - 1

III B. Tech II Semester Regular/Supplementary Examinations, August-2021

WASTEWATER MANAGEMENT

(Common to Civil Engineering, Mechanical Engineering, Petroleum Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

~~~~~~

PART –A **(14 Marks)**

1. a) What is the impact of silica on boiler feed water? [2M]
   b) Classify the methods used for color removal. [2M]
   c) What is the importance of equalization in wastewater treatment? [2M]
   d) Demonstrate the problems associated with the effluents discharged into ocean. [3M]
   e) Illustrate the characteristics of wastes of a refinery. [3M]
   f) What are the liquid waste treatment methods adopted in Pharmaceutical industries? [2M]

PART –B **(56 Marks)**

2. a) What is the water quality required for power plants? Explain. [7M]
   b) Describe the water quality requirements of a Fertilizer industry. [7M]

3. a) Explain how municipal wastewater can be made suitable for industrial use? [7M]
   b) Demonstrate the methods used for removing manganese and iron from the water. [7M]

4. a) Explain the necessity of equalization and proportioning for industrial wastewater treatment. [7M]
   b) Discuss: Volume reduction and strength reduction. [7M]

5. a) Appraise the advantages and challenges of Common effluent treatment plants. [7M]
   b) What are the problems associated with the disposal of industrial wastes into streams? [7M]

6. a) Explain the manufacturing process and origin of liquid waste from fertilizer industry. [7M]
   b) Draw the flow diagram showing the complete treatment of Steel plant. [7M]

7. a) Examine the characteristics of wastes of Tannery industry and recommended process of their treatment. [7M]
   b) Summarize the process of wastewater treatment in Distillery industry. [7M]

*****
~~~~~~