

Code No: R163201DAN

**R16**

**SET - 1**

**III B. Tech II Semester Regular/Supplementary Examinations, October/November - 2020**

**WASTEWATER MANAGEMENT**

(Common to Civil 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 are the quality requirements of industrial water? [2M]
- b) What do you mean by Ultrafiltration? [2M]
- c) What are the methods to Measure industrial wastewater Flow-generation rates? [2M]
- d) What are the advantages of Land treatment plant over other methods? [3M]
- e) What are the various stages from which wastewater are produced in steel Industries? [3M]
- f) Describe an appropriate method for disposal of wastewater generated from the Dairy and Food Processing industries. [2M]

**PART -B**

**(56 Marks)**

2. a) Explain the characteristics of wastewater. [7M]
- b) Write briefly the steps involved in the treatment of wastewater. [7M]
3. a) What are the physical and chemical methods available for odor removal from effluents? Explain anyone. [7M]
- b) What do you understand by the terms Neutralization Equalization and proportioning? Explain. [7M]
4. a) Explain how sampling is done for industrial wastewater and how it is preserved for analysis? [7M]
- b) What are the toxic chemical presents in industrial wastewater? How they are removed? [7M]
5. a) What are the problems associated with disposing waste into streams and oceans? Explain. [7M]
- b) Write a short note on effluent disposal methods. [7M]
6. a) Explain the origin and characteristics of tannery wastes. [7M]
- b) What are the effects of dairy wastes on receiving streams and sewers? Explain. [7M]
7. a) Describe the toxic pollutants in wastes coming from pharmaceutical plants, petrochemicals, and electroplating industries. [7M]
- b) How do you treat the wastewater from the nitrogenous (NH<sub>3</sub>) fertilizer plant? [7M]

\*\*\*\*\*

|||||||