III B. Tech II Semester Regular Examinations, June-2022
WASTEWATER TREATMENT
(**Common to** Civil Engineering, Petroleum Engineering)

Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks
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UNIT-I

1.	a)	What the various water quantity and quality requirements for processing the food processing waters?	[8M]
	b)	List out the various sources of industrial waste.	[7M]

(OR)

2.	a)	Explain in detail about Biological treatment of sewage.	[8M]
	b)	List out the various uses of municipal wastewater in Industries.	[7M]

UNIT-II

3.	a)	Explain about biological treatment of sewage water.	[8M]
	b)	Explain about primary, secondary and territory treatment of sewage.	[7M]

(OR)

4.	a)	Explain method for removal of iron and manganese from Industrial waste water.	[8M]
	b)	Define wastewater characterization in detail.	[7M]

UNIT-III

5.	a)	Discuss about Recirculation of industrial waste.	[8M]
	b)	Discuss the salient features of management of industrial waste disposal schemes.	[7M]

(OR)

6.	a)	What are the problems associated with disposing waste into streams and oceans?	[8M]
	b)	List out various suitability and challenges of any one common effluent treatment plant process.	[7M]

UNIT-IV

7.	a)	What are the characteristics, effects and treatment methods of liquid waste from oil refineries?	[8M]
	b)	Explain the various features involved in manufacturing process of steel plants, and the characteristics of its different effluent streams.	[7M]

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(OR)

8. a) Discuss in detail, the treatment methods needed for the wastewater generated from Fertilizers. [8M]

   b) List various treatment methods needed for the wastewater generated from coal and gas based power plant with case study. [7M]

UNIT-V

9. a) Describe the toxic pollutants in wastes coming from pharmaceutical plants, petrochemicals, and electroplating industries. [8M]

   b) Name the various treatment methods suitable for the Tanneries industry. [7M]

(OR)

10. a) Explain the characteristics and their impacts of the waste generated from food processing industries. [8M]

   b) Explain the characteristics and their impacts of the waste generated from Aqua industries. [7M]

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