R16

SET - 1

III B. Tech II Semester Regular Examinations, April/May - 2019 WASTE WATER MANAGEMENT

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

	Tim	e: 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	
1.	a)b)c)d)e)f)	What is the quality standards maintained for processing water for sugar mills? Highlight the advantages and disadvantages of Reverse Osmosis process. How do you quantify the toxicity of industrial effluents? Explain. State the standards to dispose the industrial waste into lakes. What are the standard to be maintained to dispose the waste of Paper and Pulp? Enumerate the characteristics of waste from Diary industry.	[2M] [2M] [2M] [3M] [3M] [2M]
		<u>PART -B</u>	
2.	a) b)	Describe the various water quantity and quality requirements for processing the Food processing waters. How is the water utilized for processing in sugar mills? Explain in brief.	[7M]
3.	a) b)	Discuss any two methods suitable for the removal of Iron and Manganese. What are the applications, limitations and advantages of Ultra Filtration process of industrial wastewater treatment? Explain in brief.	[7M] [7M]
4.	a)	By means of neat sketch, explain various unit operations involved in treatment of wastewater.	[7M]
	b)	Categorize and explain various pollutants found in industrial wastes.	[7M]
5.	a) b)	Discuss the salient features of management of industrial waste disposal schemes. Highlight the suitability and challenges of any one common effluent treatment plant process.	[7M] [7M]
6.	a) b)	Discuss in detail, the treatment methods needed for the wastewater generated from Fertilizers. Explain the various features involved in manufacturing process of steel plants, and the characteristics of its different effluent streams.	[7M]
7.	a) b)	Write a detailed note on the treatment methods suitable for the Tanneries industry. Explain the characteristics and their impacts of the waste generated from food processing industries.	[7M] [7M]

R16

SET - 2

III B. Tech II Semester Regular Examinations, April/May - 2019 WASTE WATER MANAGEMENT

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

	Time:	3 hours Max. M	Iarks: 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	
1.	a)	PART –A What is the importance of coagulation unit process in industrial wastewater treatment?	[2M]
	b) c) d)	Enumerate the various uses of municipal wastewater in industries. Give any six assumptions in the design of ETPs. Highlight the standards to be maintained for disposing the industrial waste into	[2M] [3M] [2M]
	e) f)	streams. State the sources and origin of waste from oil refineries. Enumerate the effects of wastes generated from pharmaceutical plants.	[3M] [2M]
2.	a)	<u>PART –B</u> Explain in detail the working principle involved in cooling industrial wastewater.	[7M]
	b)	Identify and detail the different quantity of processing water required for fertilizers industry.	[7M]
3.	a) b)	Why and how does the removal of color and odour possible with advanced treatment methodology? Explain in detail. Explain the basic concept of Adsorption and Ion Exchange as an advanced water treatment method.	[7M]
4.	a) b)	How the preservation of wastewater samples does play a significant role in its detail and accurate analysis? Explain. Describe the importance and limitations of Neutralization process in Chemical treatment of industrial wastewater.	[7M]
5.	a) b)	Define the term Oxygen Sag Curve and derive the equation of the same. Explain the effects and remedial measures of disposal of industrial wastewater through land treatment.	[7M] [7M]
6.	a) b)	State and briefly explain the characteristics and effects of waste generated from steel plant. What are various methods adopted for Colour removal in Paper and Pulp industry? Explain in detail.	[7M]
7.	a) b)	Discuss the treatment unit operations and processes required for the treatment of liquid wastes from Tanneries industry. What are the effects and control measures need to be followed for the effluent from Diary industry? Also explain the standards of the effluent.	[7M]

SET - 3

III B. Tech II Semester Regular Examinations, April/May - 2019 WASTE WATER MANAGEMENT

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

-	Γime:	3 hours Max. M	Aarks: 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	
1.	a) b)	Highlight the industrial water requirements for Cooling Water in industries. What standards are required to use municipal wastewater in any industry? Enumerate various standards.	[2M] [2M]
	c)	State various parameters considered in industrial waste survey.	[2M]
	d)	List the problems associated to dispose the industrial waste into oceans.	[3M]
	e)	State the effects and characteristics of wastes from Gas based power plants.	[3M]
	f)	What are the various standards of wastes generated from Sugar Mills?	[2M]
		<u>PART –B</u>	
2.	a)	Explain in detail about desizing and the methods of desizing.	[7M]
	b)	Describe the purpose of various pretreatment terminology adopted for processing water from power plants.	[7M]
3.	a)	Discuss the methodology of any one method of removal of iron and Manganese from wastewater.	[7M]
	b)	Explain the concept of Freezing in advanced wastewater treatment methodology.	[7M]
4.	a)	Write a short note on recycling and reuse of industrial wastewater.	[7M]
	b)	Describe in detail the various biological unit processes adopted for industrial wastewater management.	[7M]
5.	a)	What is an Effluent Treatment Plant? Explain in detail the design concepts and treatment level of EFT.	[7M]
	b)	Discuss the limitations and challenges of land treatment of industrial wastewater.	[7M]
6.	a)	What are the pollutants that demand special attention in treatment of Fertilizers industry? Explain in detail.	[7M]
	b)	Discuss the various treatment methods of liquid wastes from Textile plants.	[7M]
7.	a)	Differentiate the logic in treatment methodology of liquid wastes from Diary and Food processing industries.	[7M]
	b)	Discuss the origin and effects of Distillers industry.	[7M]

INJNTU.COM SET - 4

III B. Tech II Semester Regular Examinations, April/May - 2019 WASTE WATER MANAGEMENT

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

Tir	ne: 3	8 hours Max.	Marks: 7
		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	
1.	a) b)	PART –A What are the various sectors for which water is consumed in textile industry? Enumerate the specific developments in wastewater treatment apart from the conventional units of treatment.	[2M] [2M]
	c)	What is the significance of sampling of wastewater? Discuss.	[2M]
	d)	State the advantages of recirculation of industrial wastes.	[3M]
	e)	Sketch the wastewater treatment units provided for the treatment of Gas based power plants.	[3M]
	f)	List out the effects of the wastes generated from the pharmaceutical plants.	[2M]
		PART -B	
2.	a)	Differentiate between the processing methodologies adopted for different power plants.	[7M]
	b)	Discuss the quality requirements of processing water for various units in Food Processing industry.	[7M]
3.		Write a detailed note on the following: (i) Limitations and advantages of Ultra filtration process (ii) Working principle and cleaning process involved in Reverse Osmosis	[7M]
		process.	[7M]
4.	a)	Explain in detail the characterization of wastewater as per physical and chemical methods.	[7M]
	b)	How and why do you go for measurement of wastewater flow? Describe in brief.	[7M]
5.	a)	Explain the self purification process that takes place when the industrial waste is disposed off into streams and lakes.	[7M]
	b)	What are the various standards to be maintained for disposal of industrial wastewater into oceans? Discuss 'Marine Disposal'.	[7M]
6.	a)	Describe the manufacturing process along with its origin of Fertilizers and pesticides industry.	[7M]
	b)	Discuss in brief, the pollution effects of discharging raw wastewater along with the characteristics of raw wastewater from CGPPs and GBPPs.	[7M]
7.	a)	What are the manufacturing strategies involved in Tanneries industry? Explain in detail.	[7M]
	b)	State the characteristics along with the treatment methods involved in processing of Sugar Mill wastes.	[7M]