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**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA, GUNUPUR  
(GIET UNIVERSITY)**

M.Tech. (First Semester) Regular Examinations, February – 2025

**24MCHPE11021 – Industrial Pollution Control  
(Chemical Engineering)**



Time: 3 hrs

Maximum: 60 Marks

**Answer ALL questions  
(The figures in the right hand margin indicate marks)**

**PART – A**

**(2 x 5 = 10 Marks)**

Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. What is the importance of population equivalent in waste water?	CO1	K1
b. Write the principle of bioassay test.	CO1	K1
c. Differentiate Dry adiabatic lapse rate and Ambient lapse rate.	CO2	K1
d. List four type equalization in waste water pretreatment.	CO2	K1
e. Write role of biological method in hazardous waste reduction.	CO3	K2

**PART – B**

**(10 x 5 = 50 Marks)**

Answer **ALL** the questions

	Marks	CO #	Blooms Level
2. a. Discuss about the environmental impact of industrial waste water.	6	CO1	K2
b. What are the regulatory requirements for treatment of industrial waste water?	4	CO2	K3
(OR)			
c. Discuss about the use of water in industrial purpose considering different sectors.	10	CO1	K2
3.a. Discuss about the different sources of industrial waste water with examples.	6	CO1	K2
b. Briefly discuss the industrial scenario in India.	4	CO2	K3
(OR)			
c. What are the different meteorological factors which affect the air pollution?	8	CO2	K2
d. What do you mean by greenhouse gas?	2	CO3	K3
4.a. Explain the cyclone separator and settling chamber with neat diagram used to control the suspended particulate matter emission released from industry.	10	CO2	K2
(OR)			
b. What are the different types of wastes generated in fertilizer plant? Explain the process of treatment of waste water generated in it.	10	CO2	K3
5.a. Explain about the activated sludge treatment of waste water with neat diagram. Write its advantages and disadvantages	10	CO2	K2
(OR)			
b. Explain about the trickling filter with diagram for water purification. Write its advantages and disadvantages.	8	CO2	K2
6.a. Discuss about the waste minimization techniques for solid waste management.	10	CO4	K3
(OR)			
b. Discuss about the fluidized bed combustion method with neat diagram for the incineration of hazardous waste.	8	CO4	K3
c. Name some land disposal method of hazardous waste.	2	CO4	K1

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