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B. E / B. TECH.DEGREE EXAMINATION, MAY 2023

Sixth Semester

CH18018 – ENVIRONMENTAL ENGINEERING*(Chemical Engineering)***(Regulation 2018 / Regulation 2018A)****TIME:3 HOURS****MAX. MARKS: 100**

- CO 1** Explain the sources & effects of air pollution to the environment.
CO 2 Summarize various treatment technologies for wastewater released from process industries.
CO 3 Discuss hazardous and non-hazardous solid waste management.
CO 4 Explain the noise pollution standards and controlling methods.
CO 5 Identify the importance of Environmental Impact Assessment (EIA).

PART- A(10x2=20Marks)

(Answer all Questions)

	CO	RBT LEVEL
1. Relate the dry adiabatic lapse rate with atmospheric stability.	1	2
2. Enumerate four secondary air pollutants.	1	2
3. List four coagulants used for wastewater treatment.	2	2
4. Illustrate the pattern of bacterial growth curve.	2	2
5. Identify the problems involved in open dumping.	3	3
6. Demonstrate the characteristics by which hazardous wastes are classified.	3	2
7. Indicate the normal sound pressure level and physically painful noise level for human being according to WHO.	4	2
8. Summarize on the impact of noise pollution on plants.	4	2
9. List the objectives of Environmental impact assessment.	5	2
10. Outline the role of public in EIA process.	5	2

PART- B (5x 14=70Marks)

	Marks	CO	RBT LEVEL
11. (a) Explain the meteorological factors affecting air pollution and its effects on air pollution.	(14)	1	2
(OR)			
(b) (i) With a neat flowsheet depict the carbon cycle.	(7)	1	3
(ii) Explain with neat sketch the different types of plume behaviour.	(7)	1	3

12. (a)	(i)	Explain the diurnal variation of dissolved oxygen.	(7)	2	3
	(ii)	Discuss carbonaceous and nitrification stages in BOD estimation.	(7)	2	3
(OR)					
(b)	(i)	Explain the primary treatment methods of wastewater treatment.	(7)	2	3
	(ii)	Discuss the neutralization and equalization and its importance in industrial effluent.	(7)	2	3
13. (a)	(i)	With a neat flowsheet describe the suitable method for the disposal of hazardous waste.	(7)	3	3
	(ii)	Explain the developments in solid waste landfilling.	(7)	3	3
(OR)					
(b)		Enumerate the collection methods for municipal solid waste and compare the advantages and disadvantages of each type.	(14)	3	3
14. (a)	(i)	Discuss the limits of noise level in different areas of zones.	(7)	4	3
	(ii)	Propose control measures for noise pollution.	(7)	4	3
(OR)					
(b)		Elaborate the types and causes of noise pollution.	(14)	4	3
15. (a)	(i)	Explain the background and history of Environmental Impact Assessment in India.	(7)	5	3
	(ii)	Discuss the importance of Environmental Impact Assessment in construction projects.	(7)	5	3
(OR)					
(b)	(i)	Explain the socio-economic impacts encountered due to developmental projects.	(7)	5	3
	(ii)	Write in detail the types of monitoring and its importance.	(7)	5	3

PART- C (1x 10=10Marks)

(Q.No.16 is compulsory)

Marks CO RBT
LEVEL

16.		Propose and elaborate the suitable biological method for the treatment of industrial wastewater.	(10)	2	6
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