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SUBJECT CODE NO:- H-219
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E. (Civil)
Elective-II: Industrial Waste Treatment
(REVISED)

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B
1. Q.no.1 of section A and Q.no.6 of section B are compulsory
 2. Answer any two questions among the remaining questions (i.e 2 to 5) of section A and any two questions (i.e 7 to 10) of section B
 3. Assume suitable data mention it clearly

Section A

- Q.1 Answer the following questions 10
- a) Name various biological pollutants
 - b) Complete the following reactions $\text{HCl} + \text{NaOH} \longrightarrow \text{-----} + \text{-----}$
 - c) What are golden principles of waste Minimization
 - d) What is aim of waste Hierarchy
 - e) Define EIA
- Q.2 07
- a) State the importance of water pollution control Acts
- 08
- b) Explain in detail Whipple ecological model
- Q.3 07
- a) The sewage of a town is to be discharged into a river stream. The quantity of sewage produced per day is 8 million liters, and its BOD is 250mg/L if the discharge in the river is 200L/S if its BOD is 6 mg/L find out the BOD of diluted water. Also what should be the river discharge if it is desired to reduce the BOD of diluted water to 20mg/L
- 08
- b) State importance and Necessity of Equalization and Neutralization
- Q.4 07
- a) Explain process change & Equipment Modification ways of strength reduction of waste in industries
- 08
- a) What is importance of EIA explain in detail
- Q.5 15
- Write short notes on (any three)
- b) Physical and chemical pollutant associated with stream pollution
 - c) Functions & Responsibilities of state pollution control Boards
 - d) Utility of EIA
 - e) Environmental inventory

Section – B

- Q.6 Answer the following questions 10
- a) What is granulated sugar
 - b) Define TCD, in line with sugar industry
 - c) What in Tanning
 - d) Influent BOD of wastewater entering into specific treatment is 400mg/L and effluent BOD of wastewater coming out is 40mg/L what is efficiency of that specific treatment
 - e) What is OLR state formula for OLR
- Q.7 08
- a) Explain characterization of waste associated with sugar industry
 - b) What are various processes carried out in paper and pulp industry 07
- Q.8 08
- a) Enlist and explain design parameters of ASP
 - b) Design oxidation pond for treating sewage from a hot climatic residential colony with 5000 persons contributing sewage @ 120 LPCD and BOD₅ of sewage is 300mg/L 07
- Q.9 08
- a) List out and explain various Environmental impacts of Radioactive waste
 - b) Explain various disposal method of industrial waste 07
- Q.10 Write short notes on (any 3) 15
- a) Air stripping
 - b) Electrodialysis
 - c) UASBR
 - d) Distillery industry