

Indian Institute of Engineering Science and Technology, Shibpur  
B.Tech. 1<sup>st</sup> Semester (Gr-I/II/III/IV) Mid-Semester Examinations, February 2022  
**CE1101: Ecology and Environment**

**Full Marks: 30**

**Time: 45 Minutes**

Upload First Half and Second Half answer scripts in two separate Files

**FIRST HALF**

**Answer any two from the following**

1. a) What are the different air pollutants? Mention about their individual sources.  
b) Explain Acid rain, its source and different impacts?

(4+6=10)

2. a) What is PM<sub>2.5</sub> and PM<sub>10</sub>? Which one is more harmful and why?  
b) Explain Global Warming, and its environmental impact?

(5+5=10)

3. Discuss probabilistic approach of Risk Estimation

(10)

**SECOND HALF**

**Answer any one from the following**

4. a) Classify different physical water quality parameters.  
b) Describe source, effect and environmental significance of turbidity.  
c) Describe source, effect and environmental significance of suspended mater.

(2+4+4)=10

5. (a) A water sample has total alkalinity=500 mg/L as CaCO<sub>3</sub> and Phenolphthalein alkalinity =200 mg/L as CaCO<sub>3</sub>. Find the alkalinity species present and their concentrations.  
(b) Define and explain the terms BOD and COD  
(c) Describe use of alkalinity data in water and wastewater treatment.

(2+4+4)=10