

**PARUL UNIVERSITY**  
**B.Tech. Winter 2022-23 Examination**

**Semester: 7****Subject Code: 203103431****Subject Name: Environment Pollution Control and Safety Management****Date: 11-10-2022****Time: 10:30AM TO 1:00PM****Total Marks: 60****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

**Q.1 Objective Type Questions -****(15)**

1. What is an undesirable change in physical, chemical, or biological characteristics of air, land, water, or soil due to the introduction of contaminants called?
  - a) Succession
  - b) Pollution
  - c) Conservation
  - d) Extinction
2. Which act was passed to protect and improve the quality of our environment?
  - a) The Mental Healthcare Act
  - b) The Coal Mines Act
  - c) The National Sports University Act
  - d) Environment Protection Act
3. On what does the harmful effect of pollution depend on?
  - a) The concentration of pollutants and the organism
  - b) The concentration, duration of exposure to pollutants and the organism
  - c) The concentration of pollutants and duration of exposure
  - d) The organism only
4. Which is the most widely used technique for removing particulate matter?
  - a) Loudspeakers
  - b) Growing trees
  - c) Electrostatic precipitator
  - d) Magnets
5. Why is CNG (Compressed Natural Gas) preferred over petrol?
  - a) Burns most efficiently
  - b) It is expensive
  - c) Burns less efficiently
  - d) Can be adulterated
6. \_\_\_\_\_ is a method of solid waste disposal?
7. \_\_\_\_\_ is NOT a Green House Gas
8. Define Risk.
9. Examples of Secondary pollutants.
10. What do you understand by local toxicity and systematic toxicity?
11. Define HAZARD
12. In LOPA, community response relates to \_\_\_\_\_.
13. What are wastes from homes, hospitals, offices, schools, stores, etc., that are collected and disposed of by the municipality called?
14. Who utilizes the maximum amount of oxygen in the upstream of sewage discharge?
15. What is the reason for the increase in the BOD?

**Q.2 Answer the following questions. (Attempt any three) (15)**

- A) Define the following terms in the context of Safe Industrial Practices: (1) Accident (2) Likelihood (3) Scenario.
- B) Explain the importance of Pollution Control & Safety management in Chemical Industries.
- C) What are the various entry routes for toxicants into the biological organisms? Explain.
- D) What is Energy audit? Why it is important?

**Q.3** A) With a schematic diagram discuss the conventional treatment process of industrial wastewater (07)

B) What is Risk assessment? Explain the Fault tree analysis technique in detail, with meanings of different symbols used in it. (08)

OR

B) Discuss 'Landfill method' for hazardous solid waste disposal. (08)

**Q.4** A) State and explain the factors to be considered while doing Environment impact assessment (EIA). (07)

OR

A) Enlist the techniques used for hazard identification. Explain HAZOP method in detail. (07)

B) How many types of cavitation processes are available? Describe the mechanism of degradation of organic pollutants using photo catalysis (08)