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Total No. of Pages : 02

Total No. of Questions : 11

**B.Sc. (Honours) Chemistry (Sem.-5)**  
**INDUSTRIAL CHEMICALS AND ENVIRONMENT**

Subject Code : BHCL-305-19

M.Code : 90741

Date of Examination : 19-12-22

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of EIGHT questions carrying TWO marks each.
2. SECTION-B contains EIGHT questions carrying FOUR marks each and students have to attempt any SIX questions.
3. SECTION-C will comprise of two compulsory questions with internal choice in both these questions. Each question carries TEN marks.

**SECTION-A**

1.
  - a) Write short notes on manufacture and use of bleaching powder.
  - b) What is the hydrochloric acid? How is it prepared?
  - c) What is hazards effect of Carbon monoxide?
  - d) What is different waste from nuclear reactor?
  - e) What is hazardous effect of NO<sub>x</sub>?
  - f) What is method of estimation of CO<sub>2</sub>
  - g) What is BOD?
  - h) What is Hydal energy?

**SECTION-B**

2. What type of pollution is generated by textile industry? Discuss?
3. What is photochemical smog?

4. Write the biogeochemical cycle of carbon?
5. What is bio-catalysis?
6. What is green chemistry? Discuss its principle.
7. What is reverse osmosis? How is it helpful in water treatment?
8. How is waste water from tannery industry treated for purification?
9. What are different water purification methods? Discuss.

### SECTION-C

10. a) What is Hydrological cycle?  
b) What is meant by sludge disposal? Discuss.

**OR**

- a) What is Green House effect? Discuss the various agents causing greenhouse effect.
  - b) How living organism affected by air pollution?
11. a) What is phosgene? How is it produced? Discuss its hazardous effects?  
b) List different applications of chlorine. With equation how chlorine is used to disinfect water?

**OR**

- a) Give method of storing fluorine safely and write the hazards associated with it?
- b) Explain how borax may be used as (i) Water softener (ii) Buffer (iii) In medicine.

**NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.**