

water. How does the hardness of water affect water quality? How is the total hardness of water calculated? (6+5+4=15)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1060 D

Unique Paper Code : 2182011103

Name of the Paper : Environmental Chemistry

Name of the Course : B.Sc. Hons. Environmental Sciences – Core

Semester : I

Duration : 2 Hours Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer any **four** questions.
3. **All** Questions carry equal marks.

1. Write short notes on the following : (3×5=15)

(a) Redox reactions

(b) Electrochemical cells

(c) Oxides of nitrogen

(d) Alkalinity of water

(e) Soil organic carbon

2. Write short notes on the following (**any three**) :

(5×3=15)

(a) Photochemical smog

(b) Depletion of ozone by Chlorofluorocarbons (CFCs)

(c) Formation of acid rain

(d) Environmental impact of heavy metals pollution

3. Differentiate between the following (**any three**) :

(3×5=15)

(a) Aliphatic and aromatic organic compounds

(b) Primary and secondary pollutants

(c) Temporary and permanent hardness of water

(d) Micronutrients and macronutrients in soil

4. "Delhi has witnessed an increase in air pollution over the last couple of decades." Elaborate the reasons for the increase in air pollution in Delhi. Discuss the major air pollutants types and the chemical reactions involved in their formation.

(8+7=15)

5. Discuss the role of Nitrogen (N), phosphorous (P), and potassium (K) in soil. How can the excessive addition of NPK alter soil chemistry and soil health?

(8+7=15)

6. Discuss different physical and chemical parameters which are used to determine the potability of