

M.Sc. (Part-I) Semester-I (C.B.C.S. Scheme) Examination**ENVIRONMENTAL SCIENCE****(Environmental Chemistry)****Paper—III**

Time : Three Hours]

[Maximum Marks : 80

Note :— All questions are compulsory and carry equal marks.

1. (a) What is the effect of temperature on solubility of Oxygen in water. Explain factors affecting solubility of gases in water. 5
- (b) What do you mean by chemical potential ? Discuss with suitable example. 5
- (c) Discuss with example, Acid-Base reaction. 6

OR

- (d) Describe in detail the saturated and unsaturated hydrocarbons in detail. 5
- (e) Describe Chemical Equilibria. 5
- (f) Explain what is stoichiometry with suitable example. 6
2. (g) What are the CFCs ? Explain the types of CFCs with its sources. 5
- (h) Describe the role of CO_2 in greenhouse gases. 5
- (i) What is photochemical smog ? Discuss the chemistry for its formation. 6

OR

- (j) Describe the chemistry of Green House gases with its impacts. 5
- (k) Discuss the impacts of Acid Rain. 5
- (l) What is Earth Radiation Balance ? Mention its effect on environment. 6

3. Discuss :
- (m) Classification of Industrial Pollutant. 5
 - (n) Chemical characteristics of Waster Water. 5
 - (o) Types of pollutants generated from insecticide industries. 6

OR

- (p) Chemical characteristics of polymers. 5
 - (q) Nature of pollutant originating from textile industries. 5
 - (r) Chemical characteristics of food additives. 6
4. Define Error. Give a detailed classification of Error. Discuss any three methods used for minimizing errors. 16

OR

Define Data. Discuss the concept of true result. Distinguish between accuracy and precision. 16

5. Explain principle, working mechanism merits and demerits of flame photometry. 16

OR

Explain working principle of High Volume Sampler with its merits and demerits. 16