

Bachelor of Science (B.Sc.) Semester—III Examination
ENVIRONMENTAL SCIENCE
(Environmental Chemistry and Instrumentations)
Optional Paper—I

Time : Three Hours]

[Maximum Marks : 50

Note :— (1) All questions are compulsory and carry equal marks.

(2) Illustrate your answer with suitable examples.

1. Discuss in detail the physical properties of water. Add a note on the structure of water. 10

OR

(a) Write an informative note on composition of ocean water. 5

(b) Discuss various types of water demand in the Society. 5

2. What are greenhouse gases ? Discuss the consequences of greenhouse effect in detail. 10

OR

(a) Write an informative note on “Montreal Protocol”. 5

(b) Discuss the advantages and disadvantages of chlorofluorocarbon (CFC). 5

3. Discuss the difference between Turbidimeter and Nephelometer with diagram. Discuss its role in the application of environmental science. 10

OR

(a) Write an informative note on Hydrogen gas electrode. 5

(b) How conductance is measured in the solution ? Explain. 5

4. What is paper chromatography ? Discuss theory, principle and working of paper chromatography. 10

OR

(a) State Lambert’s and Beer’s law. 5

(b) Draw block diagram of Flame Photometer. Add a note on its significance. 5

5. Answer in brief (2–3 lines) any **TEN** :—

(a) What are the types of ground water ?

(b) Define deltas with examples.

(c) Water is buoyant medium ? Explain.

- (d) What is Dobson unit ?
- (e) What are the alternatives of CFC's ?
- (f) What are Ozone depleting substances (ODS) ?
- (g) At what angle the intensity of light is measured in Nephelometer ?
- (h) What is specific resistance ?
- (i) Define molar conductance.
- (j) What is stationary and mobile phase ?
- (k) Draw the block diagram of colorimeter.
- (l) Write the components of Flame Photometer (only name). 1×10=10