

Bachelor of Science (B.Sc.) Semester—II (C.B.S.) Examination
ENVIRONMENTAL SCIENCE (Introduction to Water and Soil Chemistry)
Compulsory Paper—1

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Illustrate your answer with suitable examples and diagrams.

1. How toxic metals and thermal pollutants are responsible for degradation of water quality ? 10

OR

- (a) Discuss general requirement for accurate sampling procedure. 5
 (b) What is a chemical composite of sea water and their characteristics ? 5

2. Explain the theory behind dissolved oxygen estimation with the help of Chemical reactions. 10

OR

- (a) Briefly explain the significance of pH in water quality. 5
 (b) What is the difference between suspended and dissolved solids ? How are they measured ? 5

3. Define Soil. Describe physical properties of soil. 10

OR

- (a) Discuss the various types of soil and their characteristics. 5
 (b) Write informative note on soil profile. 5

4. Define soil erosion. How are they broadly classified ? 10

OR

- (a) What are the objectives of soil conservation ? 5
 (b) What are the causes of soil degradation ? 5

5. Write in short on any **ten** :

- (a) What do you understand by composite type of water sample ?
 (b) Distinguish between natural and the man-made activities of water quality degradation.
 (c) Name the preservative used for fixation of D.O. on site.
 (d) Explain the significance of temperature in water quality.
 (e) What is the nature of solution that has a pH 8.5 ?
 (f) Define non-carbonate hardness.
 (g) What is pedology ?
 (h) Explain the factors affecting soil formation.
 (i) Name the important types of the rocks.
 (j) Name the agencies responsible for soil erosion.
 (k) What are the functions of humus ?
 (l) What does NWDB stand for ?

1×10=10