KNT/KW/16/5128

Bachelor of Science (B.Sc.) Semester—III (C.B.S.) Examination

ENVIRONMENTAL SCIENCE

Paper—I

(Environmental Chemistry and Instrumentations)

Time : Three Hours] [Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory.

(2) All questions carry equal marks.

(3) Illustrate your answers with suitable diagrams.

1. Discuss the solubility of oxygen and carbon di oxide in water. 10

OR

(a) Explain physical properties of water with respect to specific and latent heat. 5

(b) What are the characteristics of oceanic water ? 5

2. What are greenhouse gases ? Discuss the contribution of these gases to global warming phenomenon. 10

OR

(a) Explain various stages of Ozone Cycle. 5

(b) Write informative note on ‘‘Big Bang Theory’’. 5

3. Explain the factors affecting turbidity measurement and add a note on applications in environmental analysis. 10

OR

(a) Explain a Potentiometric Method of pH measurement. 5

(b) What are various types of conductivity cells ? 5

4. Explain the working of Flame Photometer. Add a note on its various components. 10

OR

(a) Explain the method employed for locating spot in paper chromatography. 5

(b) Explain Lambert’s and Beer’s Law. 5

5. Attempt any **TEN** :—

(i) Differentiate between Solvency and Buoyancy.

(ii) What is the composition of Sea water ?

(iii) What are the types of subsurface water ?

(iv) What are the major elements present in atmosphere ?

(v) What are Chlorofluorocarbons ?

(vi) Explain the formation of ozone hole.

(vii) What is the unit of conductivity ?

(viii) What is Turbidity ?

(ix) Draw a pH scale mentioning acidic, basic and neutral values.

(x) Distinguish between stationary and mobile phase.

(xi) Explain the composition of developing solvent.

(xii) Name the alkali metals estimated by flame photometer. 1×10=10