

NKT/KS/17/5128

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

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. Discuss in brief the physical properties of water w.r.t viscosity, surface tension and salinity. 10

**OR**

(a) Explain demand of water for various purposes. 5

(b) Write about balance of dissolved material in ocean. 5

2. What are greenhouse gases ? Describe the process of greenhouse effect. 10

**OR**

(a) Describe catalytic and non-catalytic destruction of ozone layer. 5

(b) Explain earth's radiation balance. 5

3. Describe theory of turbidometry in brief. Explain the factors which affect measurement of turbidity. 10

**OR**

(a) Explain various types of electrodes. 5

(b) Discuss applications of conductivity measurement. 5

4. Discuss in brief the principle and applications of Gas chromatography. 10

**OR**

(a) State Lambert's and Beer's law. 5

(b) Explain principle of flame photometry. 5

5. Attempt any **ten** :

(i) What is the specific heat of water ?

(ii) Define buoyancy of water.

(iii) Give examples of water conflicts in India.

(iv) What are particulate matter ?

(v) What is the full form of CFCs ?

(vi) Name the place where ozone hole was detected.

(vii) Define pH.

(viii) What is redox potential ?

(ix) Name the instrument used to measure conductivity of water sample.

(x) What is the meaning of stationary phase ?

(xi) Give any two applications of flame photometry.

1×10=10