

M.Sc. (Part-I) (Environmental Science) (CBCS Pattern) Sem-I
PSENV T01 / PSCENV T01 - Paper-I : Environmental Chemistry

P. Pages : 1

Time : Three Hours



GUG/W/22/11158

Max. Marks : 80

- Notes : 1. All questions are compulsory and carry equal marks.
2. Illustrate the answers with suitable diagrams and examples.

1. With suitable examples explain the terms normality, primary standard, secondary standard and blank titration. **16**

OR

- a) State principle of colloidal chemistry. Add a note on Nernst distribution law. **8**
b) What is solubility product? Discuss solubility of gases in water. **8**

2. Highlight fundamentals of equilibrium diagram. Describe carbonic acid system. **16**

OR

- a) Give an account on unsaturated and saturated hydrocarbons. **8**
b) Discuss oxidation-reduction processes. How redox potential is measured? **8**

3. Give the structure of water. With a neat sketch explain hydrological cycle. **16**

OR

- a) Discuss the mechanism involved in gradation of purified water. **8**
b) Write short note on chelates. **8**

4. Describe in detail the methodology to carry out soil survey. Add a note on major soil types in India. **16**

OR

- a) With a well labelled diagram describe soil profile. **8**
b) What are macro and micronutrients in soil? Discuss their role in soil fertility. **8**

5. a) Discuss Beer's and Lambert's law. **4**

b) Comment on - Green chemistry for sustainable future. **4**

c) Write about hydrolysis of metal ions. **4**

d) How soil is formed? **4**
