Roll No. ....

Total Pages : 2

BT-1/D-19

31011

CHEMISTRY (2003-04 SYLLABUS)

Paper : CH–101E

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt *five* questions in all, selecting at least *one* question from each unit. All questions carry equal marks.

UNIT–I

1. (a) Define entropy, enthalpy and free energy.

    (b) Derive Clausius Clapeyron equation.

    (c) Define chemical potential. Give its significance.

    5+10+5

2. (a) Discuss eutectic system with incongruent melting point.

    (b) Discuss phase diagram for water. Explain its unique features.

    10+10

UNIT–II

3. (a) Define hardness. Give methods of its determination. Discuss its units.

    (b) Discuss the processes of coagulation and sedimentation used for water treatment.

    8+12

4. (a) Discuss the process of desalination and give its applications.

    (b) What do you understand by sludge formation? How it can be prevented?

    (c) Describe water softening process.

    6+8+6

UNIT–III

5. (a) Giving examples, discuss Galvanic cell and concentration cell.

    (b) Explain the terms Galvanic corrosion and water line corrosion. Give examples.

    10+10

6. (a) Discuss the measures adopted to prevent corrosion.

    (b) Illustrate the mechanism of lubrication. Discuss the types of additives used in lubricants.

    10+10

UNIT–IV

7. (a) Discuss the types of polymerization. Give examples in each class.

    (b) Discuss the method of preparation and applications of PVA and GR-N.

    12+8

8. (a) Discuss various analytical methods used for characterization of polymers.

    (b) Discuss the method of preparation of silicons. Describe the properties of silicons.

    12+8