



THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

CHE/CHS 2502/PHS 2502

Time: 3 Hours

PRINCIPLES OF CHEMISTRY - II

Max Marks: 75

Answer any FIVE Questions

(5 X 15 = 75)

1. a) Discuss about the temperature dependance of rate reaction by using Arrhenius equation.
b) Derive the expression for the rate constant of first order reaction. [7+8]
2. a) Discuss Hess's law and its applications.
b) How enthalpy of combustion is measured by using Bomb Calorimeter? [7+8]
3. a) Discuss about the structure of NaCl.
b) Explain Schottky and Frenkel defect. [7+8]
4. a) What are meso compounds? Are the meso compounds optically active or inactive? Explain your answer through a suitable example.
b) Comment on the physical and chemical properties of enantiomers and diastereomers. [8+7]
5. a) Discuss about Thin layer Chromatography.
b) Explain the principle behind Paper Chromatography. [7+8]
6. a) Write note on Band theory.
b) Define half life time of a reaction. How the temperature effect the rate of the reaction? [7+8]
7. a) Explain Kirchoff's equation.
b) Write note on specific rotation. [8+7]
