

BS/2051

5807/MH

**Biophysics
Paper-VII**

**Max Marks: 52
Pass Marks: 35%**

Time Allowed: 3 hrs

Instructions for Candidates

Candidates are required to attempt two questions from each section A and B and the entire section C.

Section A

- Q1. Define Entropy. Give an account on entropy changes due to heating. [8]
Q2. Define reaction rate and Explain methods for determination of reaction order. [8]
Q3. Define Bioenergetics. Explain the biochemist and physical chemist standard states. [8]
Q4. Explain the following Theories: [8]
a. Planks Quantum Theory
b. Wave Theory

Section B

- Q5. Explain principle and application of SDS-PAGE. [8]
Q6. Give an account on principle and application of IR spectroscopy. [8]
Q7. Differentiate between Paper and Thin Layer Chromatography. [8]
Q8. Give an account on NMR and Mass spectrometry [8]

Section C

- Q9. Write a short note on following: [20]
a. Molecularity of reaction
b. Coupled reactions
c. Huckel Theory
d. Thermodynamics
e. Ideal gases
f. Immunoelectrophoresis
g. Isothermal expansion.
h. Name the loading dye used in Agrose Gel Electrophoresis.
i. What is the function of APS in SDS-PAGE Electrophoresis.
j. Give an example of first order reaction