

G 8212



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Reg. No.....

Name.....

**M.Sc. (MEDICAL BIOCHEMISTRY) DEGREE EXAMINATION  
JULY 2025**

**Second Semester**

**PRINCIPLES OF BIOPHYSICAL CHEMISTRY**

(2024 Admissions—Regular, 2019—2023 Admissions—Supplementary, 2018—2016  
Admissions—Mercy Chance)

Time : Two Hours and a Half

Maximum Marks : 80

**All questions are compulsory.**

*Draw diagrams wherever necessary*

- I. Define pH. Write the Henderson- Hasselbalch equation. Describe acid base balance, buffers and buffering capacity. Add a note on determination of pH by titrimetric-potentiometric method. (20)
- II. Define Colloids. Describe the classification, properties and biologic importance of colloidal systems. (10)
- III. Write in detail about viscosity and its biological importance. (10)
- IV. Write short notes on the following :
- 1 Van't Hoff's law of osmotic pressure.
  - 2 Hydrophobic effects of water.
  - 3 Ion selective electrodes.
  - 4 Dialysis.
  - 5 Hydrotropy.
  - 6 Applications of Partition partition co-efficient.
  - 7 Surface tension.
  - 8 Water as solvent.

(8 × 5 = 40)

