

Post graduation (M.D. - Biochemistry) Preliminary Theory Examination  
Government Medical College , Bhavnagar

Paper-1 (General and Clinical Biochemistry - Enzymology and Biostatistics )

Date : 01/07/2026

Marks : 100

**Q-1 Write detail notes on following. (20 Marks)**

- Principle and application of Tandem Mass Spectrometry

**Q-2 Write detail notes on following. (20 Marks)**

- Metabolic and endocrine changes during fasting condition and during exercise

**Q-3 Write short notes on following. (20 Marks)**

1. Write principle, significant of each component of SDS-PAGE.
2. Define HIL indexation and its significant in clinical biochemistry laboratory

**Q-4 Write short notes on the following. (40 Marks)**

1. Fact and Myth of the use of olive oil in food preparation.
2. Component of the fully automated biochemistry analyzer and its significant
3. Biochemical action of Acyclovir as DNA polymerase inhibitor.
4. Biochemical impact of different food additive and adulteration.
5. Structure and Function of Gluten , especially as food protein.
6. Enzyme activation vs Enzyme Induction
7. Biochemical explanation of pulmonary embolism in deep sea divers
8. Explain mechanism of “ Development of resistance in long term use of methotrexate”
9. Technic, advantage and disadvantage of Problem based learning
10. Requirement as per ISO 15189:2022 for POCT.