

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

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

Date : 11/08/2025

Marks : 100

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

- Type and factor affecting electrophoresis. Write principle , component , significant of the each component of SDS-PAGE and Gel electrophoresis.

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

- Write salvage pathway of purine and it's disorder. Explain biochemical reason for different type of hyperuricemia and it's management

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

1. Application of zwitter ion and protein's primary structure in pharmaco-kinetic during therapeutic use of different type of insulin. - Explain with example.
2. Explain principle, advantages and disadvantages of quantitative estimation of glucose through Ion Selective Electrode, GOD-POD method, Benedict method, urine strip method and with Glucometer.

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

1. Clinical impact of the different transport mechanism. Explain with two example of either disease or drug)
2. Technical requirement to maintain integrity of the sample between sample collection to analysis as per clause 7.2.5 and 7.2.7.3 of ISO 15189:2022 and expected risk on sample stability for biochemistry analytes.
3. Technic, advantage and disadvantage of Problem based learning
4. Write two enzyme with it's therapeutic use with it's mechanism of action.
5. Lysozyme and it's significance with medical diseases.
6. Principle, type and use of CLIA
7. Explain any five different mechanisms of chemotherapeutic drug.
8. EPA and DHA – biochemical basis of their role in health