

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

Paper-4 (Technique in experimental biochemistry, Recent advances)

Date :

Date : 29/09/2025

Marks : 100

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

- Defined classification of laboratory as per NABL-112 criteria.
- Enumerate non-human resources for the biochemistry section as per large size laboratory. Write specification for any one major resource (instrument / reagent / consumable) of each area of the laboratory (total 3) .
- Write performance validation protocol for these specified resource (instrument / reagent / consumable)

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

- Enumerate pre-analytical errors.
- Write 5 (five) quality indicators for evaluation of pre-analytical and defined bench marks for the same.
- Justify the choice of your quality indicator.

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

1. Write a quality policy and objective consistent with your defined quality indicator, for your laboratory.
2. **Case :**
Recommend investigation for differentiation, medical management and lifestyle modification with biochemical explanation for the following case.
35 year young male with known case of Idiopathic Chronic Liver Cirrhosis. No history of any addiction. Clinical features of occasional epigastric pain, pedal edema , haemorrhoid and pale tongue.

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

1. Type ,Plan, Strategy and reporting - Internal audit of Clinical Laboratory as per NABL requirement.
2. Kinetic method vs Fix time kinetic method
3. Concept of six sigma and measurement of sigma in a clinical chemistry laboratory
4. Biochemical investigation for prognosis and differential diagnosis of hypertensive patients.
5. Draft flow chart for auto verification of patient's report.
6. Policy for finding as well as updation of mean & SD in L-J Chart.
7. Defined and write required criteria of harmonization (comparability) as per ISO 15189:2022.
8. Risk management.