

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

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

Date : 14/08/2025

Marks : 100

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

- Defined classification of laboratory as per its size. 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)

- Significant inflammatory markers for differential diagnosis of COPD. Write its analytical methods. Give evaluation protocol of these markers to know etiology and differentiation of the disease.

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

1. 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. 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. Draft flow chart for auto verification and write policy for it's validation.
3. Role play of biochemist during verifying and releasing of patients clinical reports.
4. Type and approach for proficiency testing for clinical biochemistry parameters.
5. Policy for finding as well as updation of mean & SD in L-J Chart.
6. Patient's right in clinical laboratory and ethics to be maintained by laboratory personnels.
7. Defined and write required criteria of harmonization (comparability) as per ISO 15189:2022.
8. Defined risk management. Approach and implementation plan for risk management. Give any two examples for the same.