FINAL EXAM
DECEMBER 2019

 NATIONAL BOARD OF EXAMINATIONS

BIOCHEMISTRY

PAPER-I

Time: 3 hours
Max. Marks:100

BCHEM/D/19/03/I

Important Instructions:

- *Attempt all questions in order.*
- *Each question carries 10 marks.*
- *Read the question carefully and answer to the point neatly and legibly.*
- *Do not leave any blank pages between two answers.*
- *Indicate the question number correctly for the answer in the margin space.*
- *Answer all the parts of a single question together.*
- *Start the answer to a question on a fresh page or leave adequate space between two answers.*
- *Draw table/diagrams/flowcharts wherever appropriate.*

Write short notes on:

1. a) Iso-electric focusing. 5+5
   b) Polyacrylamide Gel Electrophoresis.

2. Give the norms of the lymphoid tissues distributed throughout the body. Explain how macrophages amplify a local inflammatory response. 4+6

3. Biochemical changes/findings on investigation of blood and urine in: 2.5x4
   a) Addison's disease.
   b) Cushing's syndrome.
   c) Essential primary Aldosteronism.
   d) Pheochromocytoma.

4. Describe Paper chromatography with its applications. How is TLC (Thin Layer Chromatography) Technique superior to paper chromatography? 6+4

5. List various liver tests performed in blood and urine in clinical biochemistry laboratories. Explain how these tests help in differentiating in the diagnosis of Hepatocellular Jaundice and Obstructive Jaundice. 6+4

6. a) Radio Immunoassay. 5+5
   b) Is RIA superior to spectrophotometry in analysis of blood hormones and vitamins, if so how? Explain.

7. Explain viral etiology of cancer with examples. Add a note on blood and urinary protein or enzymes useful for the diagnosis of cancer. 4+6

8. Describe the biochemical tests used for assessment of glomerular and tubular functions. How does Cystatin-C help in this assessment? 6+4

9. Discuss tests used to estimate increased risk of cardiovascular disease. Explain the importance of troponin estimation in diagnosis of acute myocardial infarction. 6+4

10. Give therapeutic applications of radioisotopes and diagnostic applications of radioisotopes. 5+5

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