

QP Code:

Reg. No.....

SECOND YEAR B. SC MEDICAL BIOCHEMISTRY

ANALYTICAL METHODS AND INSTRUMENTATION

(MODEL QUESTION PAPER)

Time: 3 Hours

Total Marks: 80

*Answer all the questions

*Draw diagrams wherever necessary

Essay

(2×15=30)

1. Describe the principle, instrumentation and applications of HPLC.
2. Define radioactivity. Discuss about various methods for measurement of radioactivity.

Short Essay

(2×10=20)

3. Elisa
4. What are general principle of chromatography, and discuss about molecular exclusion chromatography.

Short Notes

(4×5=20)

5. Discuss about different types of rotors
6. Principle and instrumentation of spectrophotometry
7. Use of radioactive Isotopes in biochemistry and medicine
8. Principle and technique of gel electrophoresis

Answer Briefly

(5×2=10)

9. Solubilizers
10. Beer-lambert's law
11. Flame photometer
12. Elution technique
13. Iso electric foccusing

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SECOND YEAR B. SC MEDICAL BIOCHEMISTRY

ENZYMOLOGY

(MODEL QUESTION PAPER)

Time: 3 Hours

Total Marks: 80

*Answer all the questions

*Draw diagrams wherever necessary

Essay

(2×15=30)

1. Discuss the various methods of regulation of enzymatic activity with suitable examples.
2. Define clinical enzymology. Discuss about five clinical important enzymes and explain the methods of estimation.

Short Essay

(2×10=20)

3. Discuss about isoenzymes. Give details about isoenzymes of LDH
4. What is inhibition of enzymes. Give the importance of competitive inhibition in clinical medicine.

Short Notes

(4×5=20)

5. Name six major classes of enzyme with examples.
6. Functional and non functional enzymes.
7. Therapeutic enzymes with examples.
8. Enzyme specificity.

Answer Briefly

(5×2=10)

9. Ribozyme
10. Coenzyme
11. Enzyme immobilization
12. Km value
13. Koshland induced fit theory

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SECOND YEAR B. SC MEDICAL BIOCHEMISTRY

Metabolism – I - Carbohydrates, Lipid & Amino Acid Metabolism

(MODEL QUESTION PAPER)

Time: 3 Hours

Total Marks: 80

*Answer all the questions

*Draw diagrams wherever necessary

Essay

(2×15=30)

1. Explain the details of TCA cycle and its significance. Add a note on its regulation and the clinical disorder related to it.
2. Explain the metabolism of aromatic amino acids with the inborn errors related to it.

Short Essay

(2×10=20)

3. oxidation of fatty acids
4. Urea cycle disorders

Short Notes

(4×5=20)

5. One carbon metabolism
6. Uronic acid pathway
7. FAS complex
8. Shuttle systems

Answer Briefly

(5×2=10)

9. Lipotropic factors
10. Cori's cycle
11. Ketone bodies
12. ATP synthase
13. PUFA