



DCBT301

Reg. No.

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III Semester B.Sc Degree Examination, April - 2023

**BIOTECHNOLOGY**

**Biomolecules**

**Paper : III**

**(NEP CBCS scheme 2020-2021 onwards)**



**Time : 2½ Hours**

**Maximum Marks : 60**

**Instructions to Candidates:**

Answer any four questions from each part.

**PART - A**

**I. Answer any four of the following.**

**(4×2=8)**

1. What are essential aminoacids?
2. Define peptide bond.
3. What are isozymes. Give an example.
4. Name a deficiency disease caused by vitamin C and D.
5. Mention the role of buffer used in agarose gel electrophoresis.
6. Write the applications of atomic absorption spectroscopy.

**PART - B**

**II. Answer any four of the following.**

**(4×5=20)**

7. Explain denaturation and renaturation of proteins. **(2+3)**
8. What are oligosaccharides? Brief on sugar derivatives oligosaccharides. **(2+3)**
9. Write a note on activation energy and transition state in enzyme activity. **(2+3)**
10. Give a brief account on structure and functions of cortisone and testosterone. **(2+3)**
11. What is electrophoresis? Write a note on SDS - PAGE. **(2+3)**
12. Define mass spectroscopy. Write its principles. **(2+3)**

**[P.T.O.]**



(2)  
PART - C

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III. Answer any **four** of the following.

(4×8=32)

13. Describe the structure and functions of polysaccharides. (4+4)
  14. Explain in detail the structure and properties of fibrous and globular proteins. (4+4)
  15. What are zymogens? Discuss its various types and functions. (2+6)
  16. Write a note on :
    - a. DNA nucleotides.
    - b. Epinephrine. (4+4)
  17. What are water soluble vitamins? Give a detail account on their dietary source and its biological role. (2+6)
  18. Explain the principle, procedure and applications of UV - visible spectrophotometry. (2+3+3)
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