

D 92276

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Name.....

Reg. No.....

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2015

(CUCBCSS—UG)

Bio Technology

BT 3B 03—BIOCHEMISTRY

Time : Three Hours

Maximum.: 80 Marks

Section A

Answer any two out of four questions in about 1500 words.

Each question carry 10 marks.

1. Give an idea about different types of chromatographic techniques used for the separation of Biomolecules.
2. Write an essay on the nature and function of electron carriers in Electron Transport Chain.
3. What are the factors that affect enzyme action ? Derive Michaelis-Menten equation.
4. Describe the salient structural features of B-DNA.

Section B

Answer any seven out of fourteen questions in about 750 words.

Each question carries 5 marks.

5. Write a note on physiological buffers.
6. What do you know about shuttle systems ? Give an example.
7. Give an idea about Cytokinins.
8. Classify aminoacids based on their polarity.
9. Discuss about fatty acid oxidation.
10. Give an idea about the stabilizing forces present in proteins.
11. Distinguish between lactate fermentation and alcoholic fermentation.
12. Write a note on homopolysaccharides.
13. Discuss about the structure and function of ATP synthase.
14. Give a brief idea about the six major classes of enzymes.
15. Discuss about the uses of Native-PAGE and SDS-PAGE

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16. Explain the role of Allosteric enzymes in metabolic regulation.
17. Discuss about the action of insulin.
18. Distinguish between α -helix and β -pleats.

Section C

Answer all questions in about 300 words.

Each question carries 3 marks.

19. Draw the structure of cholesterol and mention its biological function.
20. What do you know about mutarotation ?
21. What are isoenzymes ? Give examples.
22. Mention any *two* major functions of vitamin A.
23. What are multienzyme complexes ?

Section D

Answer all questions in about 200 words.

Each question carries 2 marks.

24. What is the significance of Pentose Phosphate Pathway ?
25. Distinguish between globular and fibrous proteins.
26. Name the pyrimidines present in RNA.
27. Mention *two* functions of growth hormones.
28. What are anomers ? Give examples.