

S.No. 5083

16 SACBT 1

(For candidates admitted from 2016-2017 onwards)

B.Sc. DEGREE EXAMINATION, APRIL 2022.

Part III — Allied

BIOMOLECULES

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL questions.

1. Define isomerism and its types.
2. What are homopolysaccharides and give two examples.
3. Draw the general structure of amino acids and mention any two essential amino acids
4. Define PKa.
5. What are essential fatty acids.
6. Expand CPPP and give the structure of steroid nucleus.
7. Elucidate on Chargaff's rule.

8. What is nucleotide?
9. What are microminerals?
10. Explain dark adaptation time.

PART B — ($5 \times 5 = 25$)

Answer ALL questions. Choosing either (a) or (b).

11. (a) Add a note on the occurrence and functions of peptidoglycan.

Or

- (b) Elucidate on the mutarotation of glucose with Fisher and Haworth projections.

12. (a) Write a note on physical properties of aminoacids.

Or

- (b) State the biological functions of glutathione peptides.

13. (a) Enumerate the biochemical functions and properties of cholesterol.

Or

- (b) Give an account on types of rancidity and its prevention.

14. (a) Elucidate the structure of DNA.

Or

- (b) Brief on central dogma of life.

15. (a) Discuss on the biochemical functions, daily requirements and symptoms of riboflavin.

Or

- (b) Explain the biochemical changes in vitamin B₁ deficiency.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. Write in detail about the occurrence, structure and functions of cellulose and starch.

17. Give a detailed explanation on the different structure of proteins.

18. Define lipids. Add a note on the biological role of phospholipids.

19. Discuss on the types of RNA with neat diagram.

20. Outline the biochemical functions, deficiency symptoms and dietary sources of Calcitrol.