

D 72958

(Pages : 2)

Name.....

Reg. No.....

**FIRST SEMESTER M.A./M.Sc./M.Com. DEGREE EXAMINATION
DECEMBER 2019**

(CBCSS)

General Biotechnology

GBTIC 02—BIOMOLECULES

(2019 Admissions)

Time : Two Hours and a Half

Maximum : 30 Weightage

Section A

Answer any four questions.

Each question carries a weightage of 2.

1. What are the functions of cyclic nucleotides ?
2. Define free energy and explain how it is related to the spontaneity of a reaction.
3. How do polar molecules and non-polar molecules behave in an aqueous environment ?
4. Mention the importance of PRPP in nucleotide biosynthesis.
5. What do you mean by invert sugar ?
6. What are the different factors that affect the resolution of thin layer chromatography ?
7. Distinguish between primary and secondary metabolites citing suitable examples.

(4 × 2 = 8 weightage)

Section B

Answer any four questions.

Each question carries a weightage of 3.

8. Write a note on any three complex lipids.
9. Discuss the role played by mass spectrometry in the identification of biomolecules.
10. Describe the physiological functions of plant and animal pigments.
11. Differentiate density gradient centrifugation and differential centrifugation.
12. What are the common reactions employed for the identification of N and C termini of a peptide ?

Turn over

13. Describe the importance of protein/peptide hormones and steroid hormones in human physiology.
14. Explain the function of physiologic buffers.

(4 × 3 = 12 weightage)

Section C

*Answer any **two** questions.*

Each question carries a weightage of 5.

15. Discuss chromatographic techniques used for the purification of biomolecules.
16. Explain the different levels of structural organization in proteins.
17. Detail the importance of vitamins in our body.
18. Write an essay on NMR spectroscopy.

(2 × 5 = 10 weightage)