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Name

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, JANUARY 2014

(CUCSS)

General Biotechnology

GB IC 02—BIOMOLECULES

Time : Three Hours

Maximum : 36 Weightage

Section A

*Answer **all** questions.*

Each question carries 1 weightage.

1. What are Zwitter ions ?
2. Name two biological buffers.
3. What are epimers ? Give examples.
4. Distinguish between r.p.m. and RCF.
5. What causes beriberi ?
6. What do you know about the nature of peptide bond ?
7. Define free energy.
8. State Beer-Lambert's law.
9. What are eicosanoids ?
10. Name the bases present in RNA.

(10 x 1 = 10 weightage)

Section B

*Answer any **seven** questions.*

Each question carries 2 weightage.

11. What is the role of pigments in plants ?
12. Give an idea about sugar derivatives.
13. Explain the working principle of electrophoresis.
14. State laws of thermodynamics.
15. Explain the functions of auxins and gibberelins.
16. What are the applications of X-ray crystallography ?
17. Classify carbohydrates citing suitable examples.

Turn over

18. Discuss about the different methods for the separation and analysis of lipids.
19. Explain the physiological functions of proteins.
20. Discuss about the functions of Vitamin A and E.

(7 x 2 = 14 weightage)

Section C

*Answer any **two** questions.
Each question carries 6 weightage.*

21. Explain the principle and applications of Mass spectroscopy.
22. Discuss about the biological significance of diffusion and osmosis.
23. Give an idea about the structure and functions of different classes of lipids.

(2 x 6 = 12 weightage)