

2025
RANI RASHMONI GREEN UNIVERSITY
ENVIRONMENTAL SCIENCE
Semester-IV
GEST: 43
Full Marks: 40
Duration: 2 hours

Candidates are required to give their answers in their own words as far as practicable.

*Answer **any 8** questions selecting **4** from each **unit**.*

Unit-1

Environmental Biochemistry and Nutrition

1. Write in brief the key features of an alpha helix. What is meant by beta strands? Mention the interactions that stabilize the tertiary structure of a protein. 2+1+2 = 5
2. What are enantiomers? What are homo and heteropolysaccharides? Give examples of each. Why is a sugar molecule without a hemiacetal considered non-reducing? 1+1+2+1 = 5
3. Why are fatty acids amphipathic in nature? Describe in brief about composition of lipoproteins showing the percentage of constituent lipids. 1+4 = 5
4. Classify enzymes following IUB. What are competitive inhibitors in enzyme action? Explain with examples. 2+3 = 5
5. Name the process and formula that synthesises ATP in cells. What is the significance of ATP in your body? Explain. 5

Unit-2

Dietary Care and Disease Management

6. Classify therapeutic diets and explain the importance of nutritional adequacy in hospital diets. 5
7. Differentiate between oral, tube, and parenteral feeding, and state the indications for each. 5
8. Describe the etiology and dietary management of any two gastrointestinal disorders. 5
9. Discuss the role of the WHO and ICMR in combating malnutrition in India. 5
10. Define nutrigenomics and explain its applications in the prevention and management of coronary heart disease. 5