

Sirna

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[SZ - S 237B]

M.Sc. DEGREE EXAMINATION

ZOOLOGY

Second Semester

BIOMOLECULES

hibben

(Effective from the admitted batch of 2022 -2023)

Time : 3 Hours

Max. Marks : 70

*Answer One Question from each unit.
All questions carry equal marks.*

UNIT - I

1. ~~(a)~~ Explain the stabilizing interactions in biological systems. 3
~~(b)~~ Describe the principles and laws of thermodynamics. 6

(OR)

2. (a) What are buffers? Discuss the buffering in biological systems.
(b) Explain entropy, enthalpy and free energy. Add a note on their significance in bioenergetics.

UNIT - II

3. ~~(a)~~ Describe the homo and hetero - polysaccharides with examples. 5
(b) Give an account on biosynthesis and degradation of glycogen.

(OR)

4. ~~(a)~~ Discuss the role of oxidative phosphorylation in bioenergetics. 2
(b) What are monosaccharides? Explain their properties.

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UNIT - III

5. (a) Give an account on the classification of amino acids. 2
(b) Describe briefly the structural organization of proteins. 3
6. (a) Write an essay on structure and synthesis of Collagen.
(b) Discuss the role of proteins in health and diseases.

UNIT - IV

7. (a) Write an account on the physical properties and reactions of triglycerides.
(b) What are prostaglandins? Explain the different types and functions.

(OR)

8. (a) Describe the classification of fatty acids. blum 3 a 4 2
(b) Write a notes on biologically important steroids. H 5 y n t

UNIT - V

9. (a) Discuss the characteristics features of A, B, C and Z DNA. cholesterol
27 carbons
D vit
bile acid
primary
(b) Write a notes on DNA binding proteins. see

(OR)

10. (a) Explain the IUB system of classification of enzymes with examples. 2
(b) What is enzyme velocity? Describe the factors influencing it.