

**P-210**

Total Pages : 3

Roll No. ....

**MSCZO-504**

**Bio-Chemistry**

M.Sc. Zoology(MSCZO)

1st Semester Examination, 2023 (June)

**Time : 2 Hours]**

**Max. Marks : 70**

**Note :** This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

**SECTION-A**

**(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. Describe four laws of thermodynamics and also write about various properties of thermodynamics.

2. Classify vitamins and briefly discuss their functions and deficiency disorders.
3. Give an account of steps involved in biosynthesis of fatty acids. Also write about their functions in the body.
4. Give detailed classification of proteins along with their chemical structures, sources and significance.
5. Explain various processes involved in protein synthesis in detail.

## **SECTION-B**

### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. What are enzymes? Describe their classification and nomenclature.
2. Describe biochemical functions of vitamin-C.
3. Write notes on :
  - (a) Decarboxylation
  - (b) Gluconeogenesis

4. Describe hexose-monophosphate shunt and add a note on its significance.
  5. Write note on ketogenesis.
  6. Explain in detail the second law of thermodynamics.
  7. Discuss deamination of essential and non-essential amino acids.
  8. What are high energy compounds? Explain with reference to adenosine triphosphate (ATP).
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