

PE-647

(612) M.Sc. BIOTECHNOLOGY (SECOND SEMESTER)

Examination JUNE 2022

Compulsory/Optional

Group-

Paper-

Name/Title of Paper- MACROMOLECULES AND ENZYMOLOGY

Time: Three Hours

Maximum Marks- 080

Minimum Passing Marks- ...

नोट: दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं।

Note: Answer From Both the Section as Directed. The Figures in the right-hand margin indicate marks.

Section A

1. Answer the following questions

1X10=10

- What is Heterochromatin
- What is role of oligosaccharides in imparting specificity to proteins
- Define International unit of enzyme activity
- What are suicidal substrates
- Define allosteric enzyme
- Name a component used for encapsulation of enzymes
- Define lipoproteins
- Define enzyme unit of trypsin
- Define melting point T_m of DNA
- Define activation energy for enzyme catalysed reaction

2. Answer the following

2X5=10

- Write a note on mitochondrial membrane structure
- Give an account of non-competitive inhibitors
- Write note lipoproteins
- Elucidate on catalytic antibodies
- Write note on protein denaturation and renaturation

Section B

Answer the following

15 X4=60

Unit I

3. Describe method for N terminal sequencing of polypeptides

Or

Elucidate on structure of t RNA and r RNA

Unit II

4. Describe nomenclature and classification of enzymes

Or

Give a detailed account of effect of temperature and pH on enzyme activity

Unit III

5. Give a detailed account of methods used for immobilization of enzyme.

Or

Describe structure and function of O linked and N linked glycoproteins

Unit IV

6. Elucidate of mechanism of action of Chymotrypsin with the help of suitable diagram

Or

Explain the methods and application of Nucleic acid hybridization