

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(Second Semester)

Branch – BIOCHEMISTRY

ENZYMOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 Identify the enzyme that removes Hydrogen from the substrate
(i) Pyruvate kinase (ii) Thiokinase
(iii) Epimerase (iv) Lactate dehydrogenase
- 2 Which one of the following is an Allosteric inhibition?
(i) Competitive inhibition (ii) Non-competitive inhibition
(iii) Feedback inhibition (iv) uncompetitive inhibition
- 3 Name the amino acid present in the catalytic triad of chymotrypsin.
(i) Serine, histidine and aspartate (ii) Serine, histidine and glutamate
(iii) Threonine, histidine and aspartate (iv) Methionine, histidine and aspartate
- 4 State the enzyme used to diagnose Cardiac disease
(i) Amylase (ii) Lipase
(iii) Urease (iv) Creatinephospho kinase
- 5 Mention the process that is not a physical method of immobilization
(i) Adsorption (ii) Entrapment
(iii) Micro encapsulation (iv) Covalent bonding

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a How bacterial enzymes are purified?
OR
b What happens to MM equation when $S \gg K_m$, $S \ll K_m$?
- 7 a List the difference between simple & allosteric enzymes?
OR
b Describe any six salient features of active site.
- 8 a How amino acids present in the active sites are identified?
OR
b Describe in detail about acid base catalysis.
- 9 a List the uses of LDH.
OR
b State the therapeutic uses of enzymes.
- 10 a What are ribozymes? Explain their activity.
OR
b Outline the applications of Immobilisation

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Classify the enzymes based on their functions.
OR
b Analyze any two factors influencing enzyme activity.
- 12 a How is activity of allosteric enzymes regulated?
OR
b Compare the competitive inhibition with non competitive and uncompetitive inhibitions.
- 13 a Elucidate the mechanism of action of carboxypeptidase.
OR
b Explain the structure and function of PDH.
- 14 a Discuss the clinical and industrial applications of enzymes.
OR
b How do you determine the subcellular localization of a enzymes?
- 15 a Summarize the role of enzymes as biosensors.
OR
b Elaborate the different methods of immobilisation.

Z-Z-Z

END