

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2017
(Second Semester)

Branch- **BIOCHEMISTRY**

ENZYMOLGY

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks!)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 List out the role of coenzymes in enzyme catalysis.
- 2 Define Km. Mention its significance.
- 3 Write a note on Positive cooperativity.
- 4 What are the characteristics of allosteric site of an enzyme?
- 5 What is a Catalytic triad? Give an example.
- 6 What do you mean by Acid base catalysis?
- 7 List any two enzymes with their therapeutic applications.
- 8 Give the uses of Alkaline phosphatase.
- 9 What are Abzymes?
- 10 What are the advantages of enzyme immobilization?

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Describe the structure, function and mechanism of Pyridine and flavin nucleotides.
OR
b Discuss the effect of temperature and pH on the catalytic efficiency of enzymes.
- 12 a Define Active Site. Explain the use of chemical modification in investigating the active site structure,
OR
b Describe the mechanism of regulation by Proteolysis.
- 13 a Explain the mode of covalent catalysis with an example.
OR
b Illustrate the mechanism of action of enzymes with reference to Carboxy peptidase.
- 14 a Comment on the diagnostic importance of isoenzymes.
OR
b Give an idea about Subcellular localization of enzymes.
- 15 a What are restriction endonucleases? Classify their types and mention their applications.
OR
b What is an immobilized enzyme? Describe micro encapsulation method of immobilization.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Elaborate the methods employed in the extraction and purification of enzymes.
- 17 Explain regulation of enzymes by covalent modification enzyme with suitable example.
- 18 Give an account of multienzyme complex with Pyruvate dehydrogenase as an example.
- 19 Elaborate the commercial and industrial application of enzymes.
- 20 Describe the nature, nomenclature and mechanism of enzymatic action of Ribozymes.