

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch – BIOTECHNOLOGY

ENZYMOLGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Turn over number is written as _____
(i) K_{cat} (ii) K_{Cat}
(iii) K_m (iv) K_c
- 2 _____ is the basic property of an enzyme.
(i) reducing activation energy (ii) increasing activation energy
(iii) increasing temperature (iv) lowering the temperature
- 3 When the reaction reaches its plateau state, _____ type of kinetics is observed.
(i) zero (ii) first
(iii) second (iv) none
- 4 Inhibition of invertase by sucrose falls into _____ category.
(i) competitive inhibition (ii) Non competitive inhibition
(iii) Product inhibition (iv) substrate inhibition
- 5 _____ among the following is used to relax the veins and arteries to lower blood pressure
(i) LDH (ii) Creatine kinase
(iii) ACE inhibitor (iv) Alkaline phosphatase

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Illustrate the properties of enzymes.
OR
b Define apoenzymes and its function.
- 7 a Write the mechanism of action of carboxy peptidase A.
OR
b Give an account on Transition state theory.
- 8 a Explain about single substrate enzyme catalysed reaction.
OR
b What is activation energy?
- 9 a Outline the properties of multienzyme complex.
OR
b Discuss about feedback inhibition of enzymes.
- 10 a Briefly list out the application of enzymes.
OR
b Write short note on catalytic antibodies.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Explain about the structure and function of NAD and PLP.
OR
b How enzymes are classified?
- 12 a State the Mechanism of action of chymotrypsin.
OR
b Discuss in detail about enzyme catalysss.
- 13 a Illustrate the basic principles of enzyme kinetics.
OR
b Explain about the Michaelis Menten Equation for enzyme catalysed reaction.
- 14 a Give the kinetics of enzyme inhibition.
OR
b Enumerate the types of enzyme inhibition.
- 15 a Describe the methods of enzyme immobilization.
OR
b How enzymes are used in clinical diagnosis?

Z-Z-Z

END