

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)  
BSc DEGREE EXAMINATION DECEMBER 2017  
(Second Semester)

Branch - BIOTECHNOLOGY

ENZYMOLGY

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

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

- 1 Do all rate laws have a reaction order.
- 2 Why is it important to measure the initial rates of reaction?
- 3 What are substrates of enzymatic reaction?
- 4 Why enzyme action is considered highly specific?
- 5 What are substrates of enzymatic reactions?
- 6 Why enzyme action is considered highly specific?
- 7 Define katal and international unit.
- 8 What are the main factors that alter the speed of enzymatic reactions?
- 9 What is enzyme immobilization.
- 10 Cite out the importance of isoenzymes.

SECTION - B (25 Marks)

Answer ALL Questions

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

- 11 a Narrate on transition state theory.  
OR  
b With few examples differentiate between cofactors and coenzymes.
- 12 a Elucidate the different strategies to purify enzymes.,  
OR  
b Organize a note on enzyme units and turn over number.
- 13 a Show the results in a Lineweaver-Burk plot with correct labels of x and y axis  
OR  
b Elaborate on Hanes plot.
- 14 a Describe the kinetics of allosteric enzymes.  
OR  
b Derive Hill equation.
- 15 a Describe the clinical and therapeutic importance of enzymes.  
OR  
b Write short notes on abzymes and ribozymes.

SECTION - C (30 Marks)

Answer any THREE Questions

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

- 16 Write an account on nucleophilic and electrophilic catalysis.
- 17 In detail explain the classification and nomenclature of enzymes.
- 18 Summarize on the types of enzyme inhibition.
- 19 Elucidate on the mechanism of allosteric interactions.
- 20 Elucidate the mechanism and function of angiotensin converting enzyme.