

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)

**BSc DEGREE EXAMINATION MAY 2024**  
(Second Semester)

Branch - **BIOCHEMISTRY**

**ENZYMOLGY**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Choose which one of the following is a biocatalyst that increases the rate of the reaction without being changed. a) Aluminum oxide      b) Silicon dioxide c) Enzyme                  d) Hydrogen peroxide	K1	CO1
	2	Show one the property of an apoenzyme a) It is a protein portion of an enzyme b) It is a non-protein group c) It is a complete, biologically active conjugated enzyme d) It is a prosthetic group	K2	CO1
2	3	Name the scientist who proposed the Induced fit theory for the formation of Enzyme-substrate complex a) Koshland                  b) Charles Iserberg c) Buchner                  d) Fisher	K1	CO2
	4	Infer multienzyme complex in humans a) Fatty acid synthetase b) Malonyl CoA Carboxylase c) Carbamoyl phosphate synthetase d) Adenosine phosphate ribosyl transferase	K2	CO2
3	5	Choose the property of competitive inhibitor of an enzyme a) Structural analogue of enzyme b) Functional analogue of enzyme c) Functional analogue of substrate d) Structural analogue of substrate	K1	CO3
	6	Indicate which one of the following compound inhibited by Organophosphorus pesticide a) Acetylcholine              b) Acetylcholine esterase c) Cytochrome oxidase      d) Sulphydryl enzymes	K2	CO3
4	7	Which of these is not a plasma specific enzyme? a) Ferroxidase                  b) Pseudo cholinesterase c) Lipoprotein lipase          d) Acid phosphatase	K1	CO4
	8	Show which of the following enzyme would be used as bleaching agents? a) Alcalase                      b) α-amylase c) Serine protease              d) Cellulase	K2	CO4

Cont...

5	9	Find the mechanism where the restriction of enzyme mobility in a fixed space is----- a) enzyme immobilization    b) enzyme inhibition c) enzyme kinetics            d) biosensor	K1	CO5
	10	Infer if the physical change accompanying the reaction is heat output, the biosensors are referred to as _____ a) potentiometric biosensors    b) optical biosensors c) calorimetric biosensors      d) amperometric biosensors	K2	CO5

**SECTION - B (35 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Derive Michalis Menden Equation	K3	CO1
	(OR)			
	11.b.	List out the factors affecting Enzyme activity		
2	12.a.	Explain Multi enzyme complex	K2	CO2
	(OR)			
	12.b.	Illustrate covalent modification of enzyme with an example		
3	13.a.	Out line the mechanism of action of chymotrypsin	K2	CO3
	(OR)			
	13.b.	Summarize Estrogen and Breast cancer		
4	14.a.	Show the diagnostic importance of enzyme with reference to LDH	K2	CO4
	(OR)			
	14.b.	Infer the factors that regulate the enzyme level in Blood		
5	15.a.	Summarize calorimetric Biosensor	K2	CO5
	(OR)			
	15.b.	Out line the role of enzymes in biodegradation of waste & plastics		

**SECTION -C (30 Marks)**

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Describe the classification of Enzymes with suitable examples	K3	CO1
2	17	Illustrate the different models of active site of an enzyme action	K2	CO2
3	18	Explain the types of Enzyme Inhibition	K2	CO3
4	19	Summarize the applications of enzymes in Food, Textile and leather industry	K3	CO4
5	20	Infer the methods of Immobilization and its applications.	K2	CO5

Z-Z-Z

END