

**S.No. 3531**

**P 16 BC 13**

(For candidates admitted from 2016 – 2017 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

Biochemistry

ENZYMES AND ENZYME TECHNOLOGY

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20)

Answer ALL questions.

1. Mention the objectives of enzyme purification.
2. What is specific activity of enzymes?
3. Define activation energy.
4. What type of energy is used in Photosynthesis?
5. What is Ping pong reaction?
6. How do you get Km from LB plot?
7. What is the function of Coenzyme A?
8. What does the transition theory state?
9. What are Abzymes?
10. What are the therapeutic uses of enzymes?

SECTION B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

11. (a) Explain any one method of determination of active site residue.  
Or  
(b) Write about enzyme classification.
12. (a) Explain the role of ATP in biological system.  
Or  
(b) What is redox reaction? Explain with an example.
13. (a) Explain Allosteric inhibition.  
Or

- (b) Explain the two types of sequential reactions.
14. (a) Give an account of electrostatic catalysis.  
Or  
(b) Write the coenzymic functions of NAD, TPP and FAD.
15. (a) Explain any two methods of enzyme immobilization.  
Or  
(b) Write a note on ribozyme and its catalytic property.

SECTION C — (3 × 10 = 30)

Answer any THREE questions.

16. Explain different methods of enzyme purification.
17. Discuss the organization and electron carriers and enzymes in mitochondria.
18. Derive MM equation. Add a note on LB plot.
19. Describe the mechanism of action and regulation of Pyruvate dehydrogenase.
20. Enumerate the applications of enzymes in industry.
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