QP CODE: 22101375

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Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) IMPROVEMENT / REAPPEARANCE EXAMINATIONS, MAY 2022

Fourth Semester

B.Sc Biotechnology Model III

Core Course - BT4CRT10 - ENZYMOLOGY

2017 Admission Onwards

E22C604E

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Differentiate isolation and purification of enzyme.
2. What is partial purification?
3. What is group specificity?
4. Name the apo enzyme-cofactor complex.
5. What is 'Gibbs free energy of activation'?
6. Construct Michaelis Menten plot and label the parameters.
7. Differentiate between homotropic effect and heterotropic effect.
8. Name the molecules which acts directly on an enzyme to lower its catalytic rate.
9. During competitive inhibition what happens to Km and Vmax?
10. What is positive cooperativity?
11. What are the enzymes used in food industry?
12. What is enzyme entrapment?

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. How do you recognize an enzyme based on its name?

14. What is the purpose of purifying an enzyme? Explain.

15. Explain the active site-substrate interaction.

16. Plot the graph and explain the effect of pH on enzyme activity?

17. Discuss the practical significance of Vmax and Km in analyzing kinetic data.

18. Construct Line weaver-Burk plot and explain the advantages.

19. Explain ping pong reactions.

20. Describe synthetic enzymes. Give examples.

21. Explain briefly on restriction endonucleases.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Explain the methods involved in extraction of membrane bound and soluble enzymes.

23. Explain how enzymes lower the activation energy.

24. Enumerate and describe various enzyme inhibitions.

25. Explain in detail different aspects of enzyme engineering.

(2×10=20)