

QP CODE: 20100825



Reg No : .....

Name : .....

**B.Sc DEGREE (CBCS) EXAMINATION, MARCH 2020**

**Fourth Semester**

B.Sc Biotechnology Model III

**Core Course - BT4CRT10 - ENZYMOLOGY**

2017 Admission onwards

022416EF

Time: 3 Hours

Marks: 60

**Part A**

*Answer any **ten** questions.*

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

1. What is meant by allosteric enzymes?
2. Mention the roles of membrane proteins.
3. Define the term 'enzyme'.
4. What is absolute specificity?
5. What is enzyme kinetics?
6. Write about MM equation.
7. Construct Michaelis Menten plot and label the parameters.
8. Differentiate between allosteric activation and allosteric inhibition.
9. What happens to  $K_m$  and  $V_{max}$  during non competitive inhibition?
10. What is cooperative ligand binding?
11. Name the enzymes used in the diagnosis of myocardial infarction.
12. What is a biosensor?

(10×1=10)

**Part B**

*Answer any **six** questions.*

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

13. What are the types of purification?





14. Explain briefly the precipitation of enzymes.
15. Explain Michaelis-Menten equation.
16. Describe the effect of pH on the reaction velocity?
17. Construct Line Weaver-Burk plot and explain the advantages.
18. Explain Feedback inhibition.
19. Explain ping pong reactions.
20. Describe the advantages and disadvantages of immobilisation.
21. What are the applications of enzyme engineering ?

(6×5=30)

### **Part C**

*Answer any **two** questions.*

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

22. Explain different strategies involved in enzyme purification.
23. Write an essay on Coenzymes.
24. Explain in detail the types of enzyme inhibition.
25. Explain the use of synthetic enzymes in clinical industry.

(2×10=20)

