

QP CODE: 25047428



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, NOVEMBER 2025

Third Semester

M Sc BIOCHEMISTRY

Core Course - BC010301 - ENZYMOLOGY

2019 ADMISSION ONWARDS

F2C2CB21

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. List and state the types of enzyme specificity.
2. Discuss the strategies to check the purity of enzymes.
3. Why apparent K_m is different from true K_m ?
4. Comment on King Altman procedure for determining velocity curves.
5. Differentiate between Dose and Response.
6. How Structure-Activity Relationship studies are helpful in drug design.
7. What is the significance of inhibitors of trypsin?
8. Comment on allosteric site of enzymes.
9. Show various stages in the industrial production glucose fructose syrup.
10. List out the applications of lactase in dairy industry.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Explain lock and key model and induced fit model of enzyme catalysis.
12. Give an account of rate enhancement theory in enzyme catalysis.
13. List the coenzymes forms of niacin and riboflavin and brief their functions.
14. Describe the binding of Oxygen with hemoglobin. Comment on the effect of 2,3-BPG in oxygen binding with hemoglobin.





15. Provide the general reactions catalyzed by major classes of enzymes. Cite examples and specify EC number for each.
16. Briefly explain the various types of covalent modifications with suitable examples.
17. Evaluate Acetyl CoA Carboxylase as a multienzyme complex system.
18. Compare and contrast between rational design and direct evolution methods of enzyme engineering.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Discuss in detail the factors affecting an enzyme catalysed reaction.
20. With the help of suitable graphical representation detail the effect of various inhibitors on enzyme kinetics.
21. Write a short note on Isoenzymes. Discuss the properties and applications of Isoenzymes.
22. List out and prove the applicability of various enzymes in disease diagnosis and therapy.

(2×5=10 weightage)

