E 3734

00003734

Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2022

Fourth Semester

Core Course 13—ENZYMOLOGY

(For B.Sc. Biotechnology)

[2013—2016 Admissions]

Time : Three Hours Maximum Marks : 80

Part A

Answer **all** *questions.*
Each question carries 1 *mark.*

1. What is luciferase ?
2. Define enzyme immobilisation.
3. What are endoenzymes ?
4. Which was the first crystallised enzyme ?
5. What are coenzymes ?
6. Name the enzyme used in genetic engineering.
7. What is K_{cat} ?
8. Define lactose free milk.
9. Name two proenzymes.
10. Define Dialysis.

(10 × 1 = 10)

Part B

Answer any **eight** *of the following.*
Each question carries 2 *marks.*

11. What are the limitations of enzyme immobilisation ?
12. What are synzymes ?

Turn over

13. Give the use of enzymes in fruit juice clarification.

14. What are the organic polymers used to construct immobilisation matrix ?

15. What are allosteric enzymes ?

16. Comment on abzymes prodrug cancer therapy.

17. Cite one example of a thermostable enzyme.

18. Name the reagents used to solubilise enzymes from membranes.

19. What is ping pong reaction ?

20. What is turn over number ?

21. Why does a wound on tongue heal faster than those on other parts of the body ?

22. What is the significance of K_m/V_{max} ratio ?

(8 × 2 = 16)

Part C

Answer any **six** *of the following.*

23. Explain the biological roles of enzymes.

24. Give an account on enzyme classification based on their chemical composition.'

25. Explain Fischer's lock and key model.

26. Write in detail about the types of reversible inhibition.

27. Give the use of enzymes in beverage industries.

28. Explain the concerted feedback inhibition. Why are metabolic pathways inhibited in this manner ?

29. How can you purify membrane-bound enzymes ?

30. Give the applications of biosensors.

31. Describe the role of zymogens in regulating enzyme activity.

(6 × 4 = 24)

Part D

Answer any **two** *of the following.*

32. How can chromatography employed in enzyme purification ?

33. What is enzyme engineering ? Give its significance.

34. Explain about industrial enzymes and their applications.

35. Write in detail about the factors affecting enzyme activity.

(2 × 15 = 30)