D.K.M.COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1.

I M.Sc BIOCHEMISTRY

S.NO	SEMESTER	ODD/ EVEN	TITLE OF THE PAPER
1	I	EVEN	ENZYMOLOGY
2	I	EVEN	INTERMEDIARY METABOLISM
3	I	EVEN	MOLECULAR BIOLOGY
4	I	EVEN	PLANT MICROBIAL BIOCHEMISTRY

I M.Sc Biochemistry

Semester : II

Tile of the paper: ENZYMOLOGY Subject Code : 15CPBC2A

SECTION-A 6 MARKS

1. What are the units to measure enzyme activity?

2. How are enzymes extracted?

3. What are endoenzymes and exoenzymes? Give example.

4. What are the criteria for enzyme – protein purification?

5. Describe the role of denaturation-fractionation in enzyme purification.

6. Describe salt fractionation.

7. Describe the role of ion-exchange chromatography in enzyme purification.

8. How is a bacterial enzyme purified?

9. What are the general precautions to be adopted during enzyme purification?

10. Give an account on the enzymes present in mitochondria?

11. How is lysosome separated? What is the marker enzyme used for?

12. Explain the use of western blotting in enzyme purification.

13. Explain the necessicity of adding chemicals during the extraction of enzymes.

14. Explain the importance of enzyme distribution in the cell.

15. How are nucleic acids removed during enzyme purification?

16. Explain the basic rules for handling the enzymes.

17. Explain fast reaction of enzyme.

18. What is stopped flow technique?

19. Give an account on the enzymes present in the cytoplasm.

20. Give an account on the intracellular localization of enzymes.

21. How are enzymes classified?

22. Give a short note on oxido-reductases.

23. What are transferases? Give example.

24. List the goals of enzyme kinetics.

25. Describe the kinetics of bisubstrate enzyme reactions.

26. What are the important assumptions made in deriving the Michael's-Menten equation?

27. Give the difference between reversible and irreversible inhibition.

28. What is a suicide inhibition?

29. Derive LB equation.

30. Derive Hanes woolf plot.

31. Derive Eadie-Hofstee plot.

32.Write a short note on competitive inhibition. Give example.

33. What is concerted inhibition?

34. Explain feedback inhibition with eg.

35. What are allosteric enzymes? Explain with example.

36. What are vitamin and non-vitamin co-enzymes?

37. Explain why most of co-enzymes are derived from vitamins.

38. Explain the role of folate co-enzymes.

39. Describe the role of biotin in carboxylation reaction.

40. Give the important reactions in which coenzyme A are involved.

41. What is FAD? Give its role in the enzyme catalysis.

42. What is the coenzymic form of vitamin B1? Give the structure and function of it.

43. Explain the mechanism of transamination in which PLP coenzyme is involved.

44. Explain the coenzymic function of NAD and NADP.

45. What is multienzyme complex? Explain with example.

46. Give the application of immobilized enzymes.

47. What are the advantages of using immobilized enzymes?

48. Discuss the clinical applications of enzymes.

49. Give an account on the industrial applications of enzymes

50. How serum enzymes are classified?

51. What are functional and non-functional enzymes?

52. What are isoenzymes? Give example with their clinical significance.

53. Give short notes on synthetic and artificial enzymes.

15 Marks:

1. Give an account on the nomenclature and classification of enzymes.

2. How are enzymes isolated and purified by various methods.

3. What are the methods used for the determination of active site of an enzyme.

4. Derive MM equation. Give the significance of Km.

5. Write a detailed account on the different types of enzyme inhibition.

6. Write about the structure and coenzymic function of NAD and FAD.

7. Give the coenzymic function of PLP.

8. Explain the structure and function of non-vitamin coenzymes.

9. What are the different methods used for enzyme immobilization?

10. Explain the structure and mechanism of action of chymotrypsin.

11. Explain the structure and mechanism of action of Lysozyme.

12. Explain the clinical and industrial applications of enzymes.

13. Give an account on enzyme engineering?