

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

ENZYME TECHNOLOGY AND BIOINFORMATICS

SECTION-A

6 MARKS

1. Write short note on enzyme technology
2. Define- biocatalysis
3. Explain the commercial production of enzymes
4. What are the applications of enzymes?
5. What are the advantages of biocatalysts?
6. What are the disadvantages of biocatalysts?
7. Explain about the biocatalysts comparison with other catalysts
8. Write short note on biocatalysts as a technology.
9. Explain about the green chemistry.
10. Estimations of Michales – Menton Parameters.
11. Types of inhibition-Explain
12. What are the characterizations of biocatalysts?
13. Explain about the enzyme kinetics
14. List out the diagnostic application of enzymes.
15. Write short note on basis of enzyme action.
16. Explain about the theories of enzyme catalysis.
17. Explain about the enzyme efficiency.
18. What is enzyme stability?
19. Write short note on selectivity of enzymes.
20. Explain about the screening of new enzyme activity.
21. Explain about the role of enzymes in organic solvents.
22. Explain the list of industrially produced enzymes and their sources and applications.
23. Explain the recovery and purification of enzymes.
24. Write short notes on role of enzymes in organic solvents
25. What are the advantages of biocatalysis in organic solvents?
26. Explain the advantages of biocatalysts in substrate as solvent.
27. Explain about the ionic liquids for enzymatic reactions.

28. Write short note on supercritical solvents for enzymatic reactions.
29. Explain the genetic engineering for microbial enzyme productions.
30. Define –bioinformatics.
31. Explain the software in bioinformatics.
32. What are the scopes of bioinformatics?
33. What are the applications of bioinformatics?
34. What is the importance of biological databases?
35. Explain the molecular biology databases.
36. Write short note on protein cluster databases.
37. Explain about the ENTREZ.
38. Explain the some websites for database searches.
39. What is pair wise alignment?
40. Explain the organizing data?
41. Explain the data models.
42. What are the differences between the hierarchical files and relational files?
43. Explain the object-oriented databases.
44. Explain the nucleotide sequence databases.
45. Write short note on global alignment.
46. Explain the gap-gap penalty.
47. Write short note on pair wise alignment.
48. Explain the multiple alignments.
49. Explain the biological databases.
50. Write short note on phylogenetic analysis.
51. Explain the introduction of databases
52. What are the classifications of biological databases?
53. Write short note on BLAST.
54. Write short note on BLAST
55. Write short note on PAM.
56. Write short note on BLOSUM.

SECTION- B 15 MARKS

1. Write a detailed account on the biocatalysts.
2. Give the classifications of biocatalysts.
3. Explain the role of biocatalysts and current status
4. Explain the advantages and disadvantages of biocatalysts.
5. Bring out the applications of green chemistry.
6. Explain the various types of characterization of biocatalyst.
7. Explain the screening of new enzyme activity.
8. Briefly describe the enzymes in organic solvents.
9. Discuss the role of water in enzyme reactions in organic solvents.
10. Describe the methods of biocatalysis in non-conventional media.
11. Discuss the role of biocatalysts.
12. Write a detailed account on the supercritical solvents for enzymatic reactions.
13. Write a detailed account on enzyme kinetics and basis of enzyme actions.
14. Explain the detailed account on supercritical solvents for enzymatic reactions.
15. Write notes on the various developments in the field of bioinformatics.
16. Write any applications of internet.
17. What are the steps to be followed to retrieve sequence from NCBI?
18. Define- UPGAMAS, Multiple sequence alignment.
19. List out the various physical properties studied to predict protein structure.
20. List of some advantages and disadvantages of PDB.
21. Explain the steps involved in construction of phylogenetic tree.
22. Discuss about the comparison of pair wise and multiple alignment.
23. Explain in detailed account on classification of biological databases.
24. Explain in detailed account on sequence database search- FASTA, BLAST.
25. Explain the amino acid substitution matrices- PAM and BLOSUM.
