

D. K. M. COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1**SEMESTER EXAMINATIONS****NOVEMBER – 2017****15CPBT3D****ELECTIVE III : ENZYME TECHNOLOGY AND BIOINFORMATICS**

Time : 3 Hours**Max. Marks : 75****SECTION – A (5 x 6 = 30)****Answer ALL the questions.**

1. (a) Write about the present scenario of application of enzymes in Industry.
(Or)
(b) Explain the principle and advantages involved in green chemistry.
2. (a) What is enzyme kinetics? What is the use of understanding the kinetics of an enzyme?
(Or)
(b) Write and explain the various theories involved in enzyme kinetics.
3. (a) Explain in short about the advantages of Biocatalysis in Organic media.
(Or)
(b) Detail protein database bank (PDB).
4. (a) Define Bioinformatics. What is the use of bioinformatics in nucleic acid research?
(Or)
(b) What is Clustal W alignment? Explain.
5. (a) What are the different types of databases available in online for sequence analysis? Give two examples in detail.
(Or)
(b) Explain BLAST. What are different types of BLAST tools available?

SECTION – B (3 x 15 = 45)**Answer any THREE of the following questions.**

6. List the catalysts involved in various industries. Explain the merits and demerits along with the comparison between them.
7. Assume that you have isolated amylase enzyme from a new bacterial source. It's required to characterize the enzyme completely. Explain how to do it?
8. What could be the ambient situation for an enzyme to work? Comment on the biocatalysis variations when it's in various solvents.
9. Explain the various alignment tools used in DNA sequence alignment.
10. Describe phylogenetic analysis. Narrate the methodologies involved in constructing a phylogenetic tree by using bioinformatics tools.
