

**M.TECH. DEGREE EXAMINATIONS: DECEMBER 2009**

First Semester

**BIOTECHNOLOGY**

BTY 551: Enzyme Technology and Applications

**Time: Three Hours****Maximum Marks: 100****Answer All the Questions:-****PART A (10 x 2 = 20 Marks)**

1. Define enzyme activity.
2. Define specific activity of enzyme.
3. Give the uses of various reactors.
4. Define Michelis-Menton parameters.
5. Define membrane bound enzymes.
6. Define chromatography.
7. Give the enzyme application in food industries.
8. Classify Hydrolytic enzymes.
9. Explain parameters involved in immobilized glucose reactor design.
10. Define inhibitors. Give examples.

**PART B (5 x 16 = 80 Marks)**

11. (a) Explain Microbial enzyme technology as an alternative to conventional chemicals.

**(OR)**

- (b) Why enzyme called Biocatalysts? Explain with an example.

12. (a) Explain Membrane entrapped enzyme technology in detail.

**(OR)**

- (b) Give the application of Michaelis – Menden parameters in enzyme technology. Explain any one method.

13. (a) Describe Ion-exchange chromatographic technique involved in enzymes Purification.

(OR)

(b) Give the principle & procedure involved in GC in detail.

14. (a) Explain Novel enzyme technology for food applications.

(OR)

(b) Give the Medical applications of enzyme. Explain any one in detail.

15. (a) Classify Biosensors. Explain working principle of Optical Biosensors.

(OR)

(b) List some artificial enzymes. How are they produced? Give its various applications.

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