

M.Sc. (Biotechnology) (NEP Pattern) Semester-II  
**NEP-96 / 02MSCBT01 - Major Paper-I : Enzymology**

P. Pages : 1

Time : Three Hours



**GUG/S/25/15333**

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw diagram wherever necessary.

1. Describe in detail line weaver Burk equation and applications. 16

**OR**

Write notes on-

- a) Commercial applications of enzymes in food industry. 8
- b) Substrate specificity with the help of lock & key model. 8

2. Explain different noncompetitive inhibitors and enzyme inhibition kinetics. 16

**OR**

- a) Discuss multienzyme complexes concept with respect to fatty acid synthase. 8
- b) Add a note on reversible inhibitors with mechanism of action. 8

3. Describe in detail isolation and purification of enzymes giving suitable example. 16

**OR**

- a) Discuss enzyme catalysis by proximity effect with suitable example. 8
- b) Explain metal ion catalysis of enzymes. 8

4. Define enzyme activation? Explain proteolytic activation giving zymogen structure. 16

**OR**

- a) Add a note on homotropic allosteric modulator. 8
- b) Explain Calmodulin mediated regulation. 8

5. Write short notes on-
- a) Effect of pH on enzyme activity. 4
  - b) Uncompetitive inhibitors. 4
  - c) Enzyme assay. 4
  - d) ATCase. 4

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