

Seat No. : _____

AF-114

April-2015

B.Sc., Sem.-VI

BIC-310 : Biochemistry

(Advanced Enzymology)

Time : 3 Hours]

[Max. Marks : 70

1. (1) Derive Michaelis Menton Equation for enzyme catalyzed reactions. **9**
(2) Discuss MWC model for allosteric enzymes. **5**

OR

- (1) Discuss reversible inhibitors in detail with appropriate examples. Discuss their effect on the enzyme kinetics. **12**
(2) Define Suicide inhibitors ? Give an example. **2**
2. (1) Describe Spectrophotometric method for following enzyme reactions with appropriate examples. **10**
(2) Write a note on handling of Enzymes. **4**

OR

- (1) Which method or methods can be used in for following these enzyme reactions ? Justify your answer.
Lactate Dehydrogenase, Amino acid Oxidase, Succinate Dehydrogenase, Acetyl Choline Esterase **12**
(2) What does Enzyme Assay mean ? **2**
3. (1) Discuss precipitation of proteins by salts & organic solvent with reference to enzyme purification. **10**
(2) Discuss the source of enzyme with reference to enzyme purification. **4**

OR

- (1) Describe in detail the various Enzyme units. **5**
(2) List the different types of column chromatography techniques used in enzyme purification. Describe any one of them in detail. **9**

4. (1) What are the advantages & disadvantages of use of enzymes as medicine ? **6**
(2) Discuss the use of enzymes as analytical reagents in estimation of various metabolites. **8**

OR

- (1) Discuss Immobilized enzymes with reference to types, methods of immobilization & properties. **12**
(2) Draw a labelled schematic diagram of a biosensor. **2**
5. Answer to the point. **14**
- (1) How are irreversible inhibitors different from reversible inhibitors ? **(2)**
(2) Define K_m & V_{max} . **(2)**
(3) What are allosteric enzymes ? Give one example. **(2)**
(4) Write two significance of K_m . **(2)**
(5) What is enzyme homogeneity ? List the various methods to check the enzyme homogeneity. **(2)**
(6) List out the different types of Biosensors. **(3)**
(7) Write one use of enzymes in Biotechnological industry. **(1)**
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