



JBF-1603120102010300 Seat No. _____

M. Sc. (Biochemistry) (Sem. I) (CBCS) Examination

December - 2019

CBC - 3 : Enzymology

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

1 Answer briefly any **seven** of the following questions : **14**

- (1) Define Turnover number.
- (2) What is allostery ?
- (3) What is end product inhibition ?
- (4) The active site takes up a large part of the total volume of an enzyme. justify.
- (5) Enlist the various factors affecting enzyme activity? explain any one in details.
- (6) What is enzyme electrode? Enlist types of enzyme electrodes.
- (7) Define Biosensor.
- (8) All enzymes are proteins but not all proteins are enzymes justify.
- (9) Explain the Cooperativity.
- (10) Write about on Koshland's theory of enzyme action.

2 Answer any **two** of the following questions : **14**

- (1) Describe classification and nomenclature of enzyme along with examples.
- (2) Write notes on repaid reaction kinetics.
- (3) Explain in detail about cooperative oxygen -binding by hemoglobin.

3 (1) Explain in detail non aqueous enzyme technology. **7**

(2) Write note on specificity of enzyme action. **7**

OR

- 3** (1) Detail short-note on Enzyme engineering. **7**
(2) Explain the enzyme mechanism by Acid, Base and electrostatic interaction. **7**
- 4** Answer the following questions : **14**
(1) Describe immobilization with respect to types, methods, applications advantages and disadvantages.
(2) Explain various ping-pong and bi-bi reaction mechanism along with examples.
- 5** Answer the following questions : (Any Two) **14**
(1) Write a note on industrial and clinical applications of enzymes.
(2) Explain the details mechanism of chymotrypsin.
(3) Explain in details about enzyme inhibition with respect to types, different plots and mention signification of K_i to interpret types of inhibition with examples.
(4) Describe in detail scope of enzymology.
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