

**2015**

*Time : 2 hours*

*Full Marks : 40*

*The figures in the right-hand margin indicate marks.*

*Answer any **four** questions.*

**(ENZYME TECHNOLOGY)**

1. Giving suitable examples, describe the procedures for spectrophotometric assay of enzyme activity. 10
  
2. (a) Derive the equation of Michaelis-Menten kinetics of enzyme action. 5  
(b) Determine the velocity of an enzyme catalyzed reaction when substrate concentration is four times of  $k_m$  and  $V_{max}$  of reaction is 12 nm/s. 5

3. Write notes on the following : 10  
(a) Enzyme turnover number  
(b) Effect of temperature on enzyme activity
4. Describe the methods for modification of enzyme activity by citing suitable examples. 10
5. Describe the catalytic activity of lysozyme. Add a note on the role of different amino acid residues of the active site in substrate hydrolysis. 10
6. Write notes on the following : 10  
(a) Action of allosteric enzymes  
(b) Molecular profiling of enzymes
7. Write notes on the following : 10  
(a) Pyruvate Dehydrogenase Complex  
(b) Enzymes for Dairy Industry
8. Describe the methods applied for immobilization of enzymes. 10

