

2016

Time : 2 hours

Full Marks : 40

The questions are of equal value.

*Answer any **four** questions.*

(ENZYME TECHNOLOGY)

1. Describe the methods for isolation and purification of enzymes.
2. (a) Give an account of the kinetics of enzyme action in the presence of a competitive inhibitor.
(b) An enzyme with a K_m of $8.5 \mu\text{M}$ and V_{max} 15 nm/s was mixed with $20 \mu\text{M}$ of an inhibitor having K_i $15 \mu\text{M}$ in an assay mixture. Determine the velocity of the reaction if substrate concentration is $50 \mu\text{M}$.

3. Write notes on the following :
 - (a) Effect of pH on enzyme activity
 - (b) Line weaver Burk plot
4. Describe how enzyme modification alters the catalytic efficiency. Giving suitable examples add a note on practical application of such technology.
5. Give an account of the mechanism of action of carboxypeptidase.
6. Write notes on the following :
 - (a) Serine protease
 - (b) Multienzyme complexes
7. Give an account of the commercial applications of enzymes in food industries.
8. Write short notes on the following :
 - (a) Effect of organic solvents on enzyme activity
 - (b) Enzymes in paper industry

