# BACHELOR OF SCIENCE (CBCS-2018 COURSE)
## T. Y. B. Sc. Sem-V :SUMMER- 2022
### SUBJECT : MICROBIOLOGY : ENZYME KINETICS & REGULATION

Day : Wednesday

Date : 13-07-2022

**S-18434-2022**

Time : 11:00 AM-02:00 PM

Max. Marks : 60

**N.B.**
1) All questions are **COMPULSORY**.
2) All questions carry **EQUAL** marks.
3) Figures to the right indicate **FULL** marks.

**Q.1** Attempt any **TWO** of the following: (12)

a) What are monomeric enzymes? Discuss the structure and function of any one example of serine proteases.

b) Explain the characteristics and functions of Tryptophan synthetase.

c) Describe the multimeric enzyme with the reactions catalyzed by it.

**Q.2** Attempt any **TWO** of the following: (12)

a) State M.M. equation. Describe it for unisubstrate enzymatic reactions.

b) Elaborate upon various types of feedback inhibition.

c) How Allosteric enzymes controls regulation? Discuss their kinetic behaviors.

**Q.3** Attempt any **TWO** of the following: (12)

a) Discuss the role of pyridoxine coenzyme in metabolic reactions.

b) What is reversible inhibition? Explain how M. M. equation is altered due to competitive equation.

c) Define Isoenzyme. Explain the structure of LDH.

**Q.4** Attempt any **THREE** of the following: (12)

a) Brief upon regulation of Glycogen phosphorylase.

b) Discuss Lineweaver Burk plot.

c) Enlist various applications of isoenzymes.

d) Explain MWC model of allosteric enzyme functioning.

**Q.5** Write short notes on any **FOUR** of the following: (12)

a) Enzyme electrode

b) Structure of FAD

c) Zymogens

d) Microarray

e) Enzyme production on large scale

\*   \*   \*