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

Day : Friday

Time : 02:00 PM-05:00 PM

Date : 16-12-2022

W-18434-2022

Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) All questions carry **EQUAL** marks.
 - 3) Figures to the right indicate **FULL** marks.
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Q.1 Attempt any **TWO** of the following: **(12)**

- a) What are serine proteases? Discuss the structure of chymotrypsin.
- b) Discuss the structure and functions of glycogen phosphorylase enzyme.
- c) Discuss the concept and use of initial velocity in enzyme kinetics.

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

- a) Describe the characteristics and structure of Lactate dehydrogenase.
- b) Explain the structure of Riboflavin coenzymes. Discuss the reactions catalyzed.
- c) What is feedback inhibition? Discuss the cumulative and sequential feedback inhibition.

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

- a) What are the characteristics and functions of multienzyme complex system. Discuss with an example.
- b) Derive the Michaelis – Menten equation.
- c) What is immobilization? Explain the covalent coupling method of immobilization of enzymes.

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

- a) Discuss the structure of ATC ase.
- b) Describe the entrapment method for immobilization of enzymes.
- c) What are biochips? Give its applications.
- d) What are the various applications of immobilized enzymes?

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

- a) MWC model
- b) Zymogens
- c) Line weaver Burk plot
- d) Non – competitive inhibition
- e) Biosensors.

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