

T.Y.B.SC. SEM – V (2014 COURSE) : SUMMER - 2018

SUBJECT: MICROBIOLOGY- ENZYME KINETICS & REGULATION

Day : **Monday**

Time: **03.00 PM TO 05.00 PM**

Date : **23/04/2018**

S-2018-0758

Max. Marks: 40

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to right indicate **FULL** Marks.
- 3) Draw neat **DIAGRAM** wherever necessary.

Q.1 Attempt ANY THREE (15)

- a) Describe in brief any one method of enzyme purification based on electric charge.
- b) What are multimeric enzymes? Explain in brief pyruvate dehydrogenase as a multimeric enzyme.
- c) Write the principle and use of fluorescence spectroscopy in enzyme assay.
- d) Give the properties of allosteric enzymes with a suitable example.
- e) Write note on: Uncompetitive inhibition

Q.2 Attempt ANY THREE (15)

- a) Explain in brief covalent modulation as a mode of enzyme regulation. Give a suitable example.
- b) Write note on- Serine proteases.
- c) What are immobilized enzymes? Give the industrial importance of the same.
- d) Enlist various classes of enzymes and elaborate on any one.
- e) Explain Lineweaver-Burk plot.

Q.3 Attempt ANY FIVE (10)

- a) Draw the Michaelis-Menten plot.
- b) Schematically represent conversion of trypsinogen to trypsin.
- c) Give coenzyme form of coenzyme –A and state the reaction catalyzed.
- d) Diagrammatically illustrate Affinity chromatography.
- e) Give the Lineweaver-Burk plot to demonstrate the Non-competitive inhibition.
- f) Define with suitable diagram-Dialysis of enzyme
- g) Define the term optimum pH and optimum temperature.

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