T.Y.B.SC. SEM – V (CBCS - 2016 Course) : SUMMER - 2019

SUBJECT : MICROBIOLOGY ENZYME KINETICS AND REGULATION

Day : Saturday
Date : 27/04/2019

S-2019-0876

Time : 11.00 A.M. To 02.00 P.M.
Max. Marks : 60

N.B.

1) All questions are **COMPULSORY**.
2) Figures to the **RIGHT** indicate **FULL** marks.

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

a) Define the term oligomeric enzymes. Write characteristics and function of oligomeric enzymes with suitable example.
b) Explain the role of covalent modulation in regulating Glycogen phosphorylase functioning.
c) Draw and describe Hanes plot.

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

a) What are zymogens. Describe with suitable example the covalent activation of zymogen.
b) Give comparative account of competitive inhibition and noncompetitive inhibition.
c) Write the coenzyme form of pyridoxine and state any two reactions where it is used.

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

a) Write a detailed note on KNF model.
b) Giving a suitable example explain feedback inhibition with reference to cumulative regulation.
c) What are isoenzymes? Write various isoenzyme forms of lactate dehydrogenase. Schematically show the technique used in separating these forms.

Q.4 Write short notes on **ANY THREE** . **(12)**

a) Michaelis Menten equation
b) Enzyme electrode
c) Cooperativity in allosteric enzymes
d) Vitamins as coenzyme

Q.5 Attempt **ANY FOUR** of the following. **(12)**

a) Write any three applications of immobilized enzymes.
b) Write biotechnological applications of enzymes.
c) Draw Edie-Hofstee Plot.
d) Write the characteristics of pyruvate dehydrogenase
e) Diagrammatically explain working of biochips.
f) What are Allosteric enzymes?

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