MASTER OF SCIENCE (CHEMISTRY) (CBCS - 2018 COURSE)
M.Sc. (Chemistry) Sem-IV OC :SUMMER- 2022
SUBJECT : BIO-ORGANIC CHEMISTRY

Day : Thursday
Date : 7/7/2022

S-20167-2022

Time : 03:00 PM-06:00 PM
Max. Marks : 60

N.B.

1) All questions are COMPULSORY
2) Figures to the right indicates FULL marks
3) Answers to the both sections should be written in SEPARATE answer book

SECTION – I

Q.1 Attempt Any **THREE** of the following: **(15)**

a) What is the effect of temperature , pressure, pH and concentration on enzyme catalysed reactions
b) Discuss in detail about oxidoreductases and isomerases.
c) Derive Michaelis-Menten equation
d) Explain three point attachment rule with suitable example
e) Discuss any two enzyme catalysed diasteroselective reactions

Q.2 Attempt Any **THREE** of the following: **(15)**

a) Discuss the properties of pyrimidine bases.
b) Explain the tertiary structure of DNA in brief.
c) Describe the hydrolysis of RNA
d) Differentiate between nucleoside and nucleotides
e) Explain the various types of RNA with suitable structure

SECTION -II

Q.3 Attempt Any **THREE** of the following: **(15)**

a) Discuss the merits and demerits of enzymes in organic synthesis
b) Distinguish between lock and key mechanism and Induced-Fit model?
c) Discuss in detail desolvation and salvation - substitution theory
d) Explain enzyme selectivity in detail with suitable examples.
e) Draw the structure of t-RNA

Q.4 Attempt Any **THREE** of the following: **(15)**

a) Discuss the primary structure of DNA
b) Explain the role m-RNA.
c) Explain base catalysed hydrolysis of nucleic acid
d) Write a note on enzymes
e) Draw the structures of pyrimidine bases.

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