Total No. of Questions :4]

SEAT No. : ____

P682

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[5315]-217
S. Y. B. Sc.
MICROBIOLOGY
MB - 221: Bacterial Genetics
(2013 Pattern) (Semester-II) (Paper -I) (Regular)

Time : 2 Hours] ***[Max. Marks :40***

Instructions to the candidates :

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Draw neat labelled diagrams wherever necessary.***

Q1) Attempt the following: **[10]**

a) Define Spontaneous mutations.

b) Define Base Analogues.

c) Define Relaxed plasmids.

d) Write 2 example of Alkylating agents.

e) Structure of Thymine.

f) Plasmid DNA replicates by _____ mechanism

g) Fluctuation test was devised by _____.

h) Purine replaced by a Pyrimidine in DNA is referred to as _____.

i) State True or False: A form of DNA erusts under dehydrated conditions.

j) State True or False: Bacterial genome is positively supercoiled.

Q2) Attempt any two of the following. **[10]**

a) Define mutations. Explain using conditional lethal mutants.

b) Define plasmids Explain the phenomenon of plasmid Incompatibility with suitable example.

c) Define mutagens. Give role of biological mutagen with a suitable example.

P.T.O.

Q3) Diagrammatically represent any two of the following: **[10]**

a) Leading and Lagging strand synthesis.

b) Hershy and chase experiment.

c) Q model of Semi- discontinuous replication

Q4) Attempt any one of the following. **[10]**

a) What is central dog ma. Explain in detail the mechanism of Translation in bacteria.

b) Define Induced mutations Enlist the various mutagenic agents. Explain in detail the mechanism of action of U.V and X rays on DNA.

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