S.Y.B.SC. SEM – III (2014 COURSE) : SUMMER - 2018
SUBJECT: MICROBIOLOGY: BACTERIAL GENETICS

Day: Tuesday
Date: 17/04/2018

S-2018-0709

Time: 12.00 NOON TO 02.00 PM
Max.Marks: 40

N.B:

1) All questions are COMPULSORY.
2) Numbers to the right indicate full marks.
3) Draw neat labeled diagrams wherever necessary.

Q.1 Attempt **ANY TWO** of the following **(10)**

a) Enlist the different properties of Genetic code? Elaborate on any one.

b) Enlist all the different enzymes involved in bacterial DNA replication with their putative functions?

c) Explain Avery McLeod and McCarthy's work.

Q.2 Attempt **ANY TWO** of the following. **(10)**

a) With the help of a neat labeled diagram explain mechanism of Rolling circle replication.

b) Comment on " Wobble hypothesis".

c) Explain Diagrammatically Replica plate technique for the isolation of mutants?

Q.3 Attempt **ANY TWO** of the following **(10)**

a) Differentiate between Spontaneous and Induced mutations.

b) Give the structure of a nucleoside.

c) Differentiate between the Organization of bacterial and eukaryotic Chromosome.

Q.4 Define / Explain / Write in short on **ANY FIVE** of the following:- **(10)**

a) Genotype and Phenotype.
b) Enlist characteristics of Genetic material.
c) Central dogma in Molecular biology.
d) Conditional lethal mutants.
e) DNA Modifying agents.
f) Recombination repair.
g) Mechanism of transposition.

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