

S.Y.B.SC. SEM – III (2014 COURSE) : WINTER - 2017

SUBJECT : MICROBIOLOGY : BACTERIAL GENETICS (MB – 32)

Day : Saturday
Date : 28/10/2017

Time 12.00 NOON TO 02.00 PM
Max. Marks : 40

W-2017-0617

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagrams **WHEREVER** necessary.
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Q.1 Attempt any **TWO** of the following: **(10)**

- a) Explain “DNA is the transforming principle” with a suitable experiment.
- b) Draw the structure of adenine and guanine.
- c) Explain DNA replication by ‘ θ ’ model in bacteria.

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

- a) Enlist features of the Genetic code.
- b) Explain the action of any one base analogue as a mutagenic agent.
- c) Explain Lederberg and Lederberg’s experiment to prove that mutations are spontaneous.

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

- a) Explain the features of DNA replication.
- b) Differentiated between B and Z form of DNA.
- c) What are reversions and suppressions? Explain with suitable examples.

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

- a) Transition
- b) Ames’s test
- c) Microlesions
- d) Central dogma in molecular biology
- e) Triplet code
- f) DNA methylation
- g) Initiation codon

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