

S.Y.B.SC. SEM – III (CBCS - 2016 Course) : WINTER - 2018

SUBJECT: MICROBIOLOGY: BACTERIA GENETICS

Day : Monday
Date : 22/10/2018

W-2018-0715

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.
 - 3) Draw neat labeled diagrams **WHEREVER** necessary.
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Q.1 Attempts **ANY TWO** of the following : (12)

- a) Describe Z DNA.
- b) "RNA is the genetic material in some viruses". Explain with the help of a suitable experiment.
- c) Describe the structure of eukaryotic chromosome.

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

- a) Enlist and describe the steps in DNA replication.
- b) How did Griffith demonstrate the process of transformation?
- c) Explain the concept of a triplet code.

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

- a) Describe any six milestones in deciphering the Genetic code.
- b) Describe the action of different chemicals on DNA.
- c) Explain Lederberg and Lederberg's experiment.

Q.4 Attempts **ANY THREE** of the following : (12)

- a) Explain the concept of suppression with suitable examples.
- b) Justify: Genetic code is universal.
- c) Differentiate between dark repair and light repair.
- d) Differentiate between purines and pyrimidines.

Q.5 Explain/define/comment on write in short on/draw a well labeled diagram of (12)
ANY FOUR of the following:

- a) Initiation codon
- b) Nick translation
- c) Frame shift mutations
- d) Central dogma in molecular biology
- e) Overlapping genes
- f) Stem and loop structure

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