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BACHELOR OF SCIENCE (CBCS-2018 COURSE)
S. Y. B. Sc. Sem-III : WINTER- 2022
SUBJECT : MICROBIOLOGY : BACTERIAL GENETICS

Day : Saturday

Time : 10:00 AM-01:00 PM

Date : 10/12/2022

W-18360-2022

Max. Marks : 60

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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 Attempt **ANY TWO** of the following: [12]

- a) Prove the statement. "The genetic code is a triplet."
- b) Explain with a diagrammatic representation that DNA is a genetic material in some viruses.
- c) Describe the principle and procedure of Ame's test.

Q.2 Attempt **ANY TWO** of the following: [12]

- a) What are the milestones in deciphering the genetic code?
- b) Describe the Θ mode of replication with a diagrammatic representation.
- c) Comment on- "Ultraviolet light is a fairly potent mutagen".

Q.3 Attempt **ANY TWO** of the following: [12]

- a) With the help of a suitable diagram, describe the process of transcription.
- b) Name and describe the three modes proposed for DNA replication.
- c) What is the principle behind New Combe's experiment?

Q.4 Attempt **ANY THREE** of the following: [12]

- a) Isoaccepting t RNA's.
- b) Bends in DNA.
- c) Transversion mutation.
- d) Initiation codons.

Q.5 Attempt **ANY FOUR** of the following: [12]

- a) Justify the statement. "Genetic code is nonoverlapping".
- b) Enlist the various DNA polymerases and give their functions.
- c) What are nonsense mutations?
- d) Describe the key features of A form of DNA.
- e) Discuss any one type of damage caused to DNA.
- f) What is reversion mutation?