

**2003000203020116**  
**EXAMINATION DECEMBER 2024**  
**BACHELOR OF SCIENCE ( NON-NEP ) (THIRD SEMESTER)**  
**BIO SCIENCE PAPER - IV - BS-302:MICROBIAL GENETICS**

[Time: As Per Schedule]

[Max. Marks: 50 ]

**Instructions:**

**1. Fill up strictly the following details on your answer book**

- a. Name of the Examination: **BACHELOR OF SCIENCE (NON-NEP) (THIRD SEMESTER)**
  - b. Name of the Subject: **BIO SCIENCE PAPER - IV - BS-302: MICROBIAL GENETICS**
  - c. Subject Code No: **2003000203020116**
2. Draw neat & clean diagram wherever necessary.
3. Figures to the right indicate full marks.

Seat No:

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Student's Signature

**Q.1 Multiple choice questions:**

**08**

1. Name the conjugated protein used as genetic material in living cells;
  - a. Glycoprotein
  - b. Metalloprotein
  - c. Lipoprotein
  - d. None
  
2. By which bonds the purine & pyrimidine pairs of complementary strands of DNA held together?
  - a. H-bonds
  - b. C-bonds
  - c. N-bonds
  - d. O-bond
  
3. Central dogma of the life is\_ \_ \_ \_ \_
  - a. DNA → DNA → Protein
  - b. RNA DNA → Protein
  - c. DNA protein → RNA
  - d. None
  
4. Who supported Griffith effect by molecular explanation?
  - a. Hershey and Chase
  - b. Watson, crick
  - c. Avery, McCarty and Macleod
  - d. Griffith and Avery
  
5. A Codon is\_ \_ \_ \_ \_
  - a. Universal
  - b. Triplet
  - c. None overlapping
  - d. All
  
6. Transcription occurs in\_ \_ \_ \_ \_
  - a. Nucleus
  - b. Ribosome

c. Cytoplasm

d. All

7. Single base change in nucleotide is called\_\_\_\_\_
- a. Biochemical mutation
  - b. Lethal mutation
  - c. Chromosomal mutation
  - d. None
8. Which of the following is a DNA repair mechanism?
- a. Indirect
  - b. Match
  - c. Excision
  - d. All

**Q.2 [A] Answer as directed: 04**

1. State any two nucleoside
2. State the any two gene mutation.
3. Nucleotide sequence of DNA is ---ATCTAGGCTAAGCTA--- then what will be the sequence in the complementary strand?
4. Define: Ribozyme.

**10**

**[B] Write short note on (Any Two)**

1. T-RNA.
2. Replication machinery.
3. Point mutation.

**Q.3 Write an essay on - Replication of DNA 14**

**OR**

**Answer the following questions. 14**

1. Write a note on Nucleotide.
2. Describe in brief various types of RNA.

**Q.4 Answer any two of the following. 14**

1. Write a detailed account on types of mutation
2. Describe in brief transcription.
3. Write a note on Genetic code.

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