



RAN-2103000205021051

B.Sc. (Non-NEP) (Sem. - V) Examination October - 2025

Bioscience (Microbiology) : Microbial Taxonomy and Virology

Paper - BS 501

Time: 2 Hours]
[Total Marks: 50
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book
- (2) Figures to the right indicate full marks of the question.
- (3) Draw neat and labeled diagrams whenever necessary.

Seat No.:

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Student's Signature

Q. 1 Multiple choices Questions. (MCQ)
08

1. The highest taxonomic rank is _____
(A) Kingdom (B) Division
(C) Domain (D) Phylum
2. Binomial system was introduced by _____
(A) Carl Woese (B) Carl Linnaeus
(C) Carl Landsteiner (D) Charles Darwin
3. Which of the following are achaeobacteria?
(A) Methanobacteria (B) Thermococci
(C) Halobacteria (D) All
4. Proteobacteria are divided into _____
(A) Alpha Proteobacteria (B) Beta Proteobacteria
(C) Gamma Proteobacteria (D) All
5. An example of viral classification system is _____
(A) Woese system (B) Baltimore system
(C) Whitaker classification system (D) All
6. Viroids are infectious agents that consist only of _____
(A) Protein (B) DNA
(C) RNA (D) None
7. Which enzyme is present in the phage tail that weakens the bacterial cell wall?
(A) Amylase (B) Herbidase
(C) Lysozyme (D) Protease
8. Bacteria which participate in lysogenic cycle is known as _____
(A) Prophage (B) Temperate bacteria
(C) protophage (D) Lysogenic cells

Q. 2 (A) Give Specific answers
04

1. What is phylogenetic tree?
2. How does a viroid differ from a satellite?
3. Which similarities found between Archaea and bacteria?
4. What is Prophage?

- (B) Write short notes on any two of the following** **10**
1. Archea
 2. Lysogeny
 3. Biochemical Characteristics used in microbial taxonomy
- Q. 3** (a) Describe Phenetic, Genotypic, Phylogenetic classification in detail. **14**
(b) Write in detail about Taxonomic ranks
- OR**
- Q. 3** Discuss about introduction and organization of Bergey's Manual of Systematic Bacteriology. in detail. **14**
- Q. 4** **Explain any two of the followings.** **14**
1. Discuss the ways that viruses can be cultivated.
 2. Replication of T-Even phage.
 3. Baltimore classification system of viruses
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