

RAN-2403000503038001
S.Y.B.Sc. (NEP) (Sem.-III) Examination March - 2026
Bioscience (Microbiology)
BM-MJ-303: Microbial Taxonomy and Virology
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. (3) Draw neat & clean diagram wherever necessary.	Seat No.: Student's Signature
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- Q-1. Multiple choices Questions. (MCQ) (Any ten) 10**
- 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) Biovars, morphovars and serovars are described for a _____
a) Subspecies
b) Strains
c) Genus
d) None
 - 4) Which of the following are not an achaeobacteria?
a) Mycobacteria
b) Actinomycetes
c) Chlamydia
d) All
 - 5) Which of the following is an anoxygenic photosynthetic bacteria?
a) Green sulfur bacteria
b) Green nonsulfur bacteria
c) Purple sulfur bacteria
d) All
 - 6) Proteobacteria are divided into _____
a) Alpha Proteobacteria
b) Beta Proteobacteria
c) Gamma Proteobacteria
d) All
 - 7) _____ Properties are used to classify viruses.
a) Type of NA
b) NA strandedness
c) Capsid symmetry
d) All

- 8) Which of the following is a bacterial viruses?
 - a) TMV
 - b) HAV
 - c) Lambda Phage
 - d) None
- 9) An example of viral classification system is _____
 - a) Woese system
 - b) Baltimore system
 - c) Whitaker classification system
 - d) All
- 10) Viroids are infectious agents that consist only of _____
 - a) Protein
 - b) DNA
 - c) RNA
 - d) None
- 11) Which enzyme is present in the phage tail that weakens the bacterial cell wall?
 - a) Amylase
 - b) Herbidase
 - c) Lysozyme
 - d) Protease
- 12) Bacteria which participate in lysogenic cycle is known as _____
 - a) Prophage
 - b) Temperate bacteria
 - c) Protophage
 - d) Lysogenic cells

Q-2. Answer any two of the following :- 10

- 1) Describe in brief Phenetic, Genotypic, Phylogenetic classification.
- 2) Write in detail about Taxonomic ranks.
- 3) Write a note on Phylogenic tree.

Q-3. Discuss in detail about introduction and organization of Bergey's Manual of Systematic Bacteriology. 10

OR

**Q-3. 1) Write a note on-Proteobacteria.
2) Describe in brief methanogenic bacteria.**

Q-4. Explain any two of the followings. 10

- 1) Baltimore classification system of viruses.
- 2) Describe in brief properties of viruses.
- 3) Write a note on structure of virus.

Q-5. Write an essay on methods for cultivation of virus. 10

OR

- 1) Discuss the replication of T-Even phage.
- 2) Write a note on oncogenic virus.
