

B.Sc. Semester – 1 (NEP-2020) Examination**January-2024****Microbiology (Major-1)****Time: 2:00 Hours****Marks: 50****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Que.1 Answer the question in detail. (10)

- (1) Summarize the lytic and lysogenic cycle of Virus.

OR

Que.1 Answer the following question shortly (Each question carries 5 marks).

- (1) Define various morphological structures of Viruses.

- (2) Write a short note on general characters of Viruses.

Que.2 Answer the following question shortly (Each question carries 5 marks). (10)

- (1) Discuss the role of Viruses in Vaccine production.

- (2) Describe the role of Viruses in medicine and diagnostics.

OR

Que.2 Answer the following question shortly (Each question carries 5 marks).

- (1) Discuss Diseases “Bunchy top of Banana” caused by viruses.

- (2) Discuss Diseases “Leaf curl of papaya” caused by viruses.

Que.3 Answer the question in detail. (10)

- (1) Describe the process of Recombination in Bacteria.

OR

Que.3 Answer the following question shortly (Each question carries 5 marks).

- (1) Shortly describe the asexual reproduction in Bacteria.

- (2) What is mycoplasma? Explain it.

Que.4 Answer the question in detail. (10)

- (1) Briefly describe the life-cycle of *Nostoc*.

OR

Que.4 Answer the following question shortly (Each question carries 5 marks).

- (1) State the economic importance of Bacteria.

- (2) Discuss the role of Cyanobacteria in nitrogen fixation.

Que.5 Answer the following questions very shortly (2 marks for each question). (10)

- (1) Differentiate between viroids and prions. Name a disease thought to be caused by each of them.

- (2) For the replication of a virus in its host, it is not necessarily essential for the protein coat of the virus to enter the host cell. Why is this so?

- (3) State the application of TMV.

- (4) State the group of animal viruses according to the type of tissue, they infect.

- (5) Define “Retroviruses”.

OR

Que.5 Answer the following questions very shortly (2 marks for each question).

- (1) Define endospores.

- (2) State the different shape of Bacteria with an example.

- (3) How many types of arrangement are occur in bacterial flagella? Give its name.

- (4) Give any four name of bacterial cell wall content.

- (5) Define heterotrophic nutrition.
