

Seat No. : _____

AD-124

April-2025

B.Sc., Sem.-VI

MI-308 : Microbiology (Virology & Mycology)

Time : 2:30 Hours]

[Max. Marks : 70

- Instructions :**
- (1) All questions are compulsory.
 - (2) Figures on the right indicates marks.
 - (3) Mention correct question number against the answer.
 - (4) Draw figures wherever necessary.

1. Describe the general characteristics and structural organization of viruses. 14

OR

1. (A) Write a note on the *In vitro* cell culture methods for the cultivation of viruses. 7
(B) Briefly explain oncogenic viruses with examples. 7

2. Discuss in detail intracellular morphogenesis of the lytic bacteriophage. 14

OR

2. (A) Write a note on the structure and replication of TMV virus. 7
(B) Discuss one step growth curve experiment and burst size. 7

3. Describe in detail somatic structure of the fungal cell and types of fungal spores. 14

OR

3. (A) Write a note on the hyphal modifications observed in fungi. 7
(B) Give an overview of the economic importance of fungi. 7

4. Write a descriptive note on Ascomycetes and its economic importance. 14

OR

4. (A) Describe salient features of Myxomycetes. 7
(B) Write a note on important criteria used for fungal classification. 7

5. Give short and specific answers in **1-2** lines only : (any **seven**)

14

- (1) What is cytopathic effect ?
 - (2) How do viroids differ from virusoids ?
 - (3) Mention two examples of latent viral infections.
 - (4) Write the roles of Cro and Q protein in the lambda bacteriophage life cycle.
 - (5) Name two receptors that HIV uses to enter the host cell.
 - (6) Enlist two characteristics of the MS2 phage.
 - (7) Name two secondary metabolites of fungi.
 - (8) What is the mode of fungal nutrition ?
 - (9) What is somatogamy ?
 - (10) What are the salient features of Basidiomycetes fungi ?
 - (11) Write two economic importance of Phycomycetes fungi.
 - (12) Name two pathogenic genera belonging to Chytridiomycetes.
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