

**BACHELOR OF SCIENCE (CBCS-2018 COURSE)**  
**T. Y. B. Sc. Sem-V : WINTER :- 2021**  
**SUBJECT: MICROBIOLOGY : VIROLOGY**

**Day : Monday**  
**Date 24-01-2022**

**W-18432-2021**

**Time : 02:00 PM-05:00 PM**  
**Max. Marks: 60**

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the **RIGHT** indicate **FULL** marks.
  - 3) Draw neat and labeled diagram wherever necessary.
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- Q.1** Attempt **ANY TWO** of the following : **(12)**
- a) Describe the structure of viral capsids.
  - b) With well labelled diagram explain the structure of HIV.
  - c) Explain isolation and cultivation of plant viruses.
- Q.2** Attempt **ANY TWO** of the following : **(12)**
- a) Explain general properties of prions.
  - b) Discuss chick embryo technique for isolation and cultivation of animal viruses.
  - c) Describe latex droplet method for the enumeration of viruses.
- Q.3** Attempt **ANY TWO** of the following : **(12)**
- a) Explain one step growth curve.
  - b) Briefly explain reproduction in adeno virus.
  - c) Discuss viral nucleic acids.
- Q.4** Write short notes on **ANY THREE** of the following: **(12)**
- a) T odd phages
  - b) Haemagglutination assay
  - c) Reproduction in TMV
  - d) Influenza viruses
- Q.5** Attempt **ANY FOUR** of the following : **(12)**
- a) Explain various steps in isolation and cultivation of bacteriophages.
  - b) Describe the structure of viral envelope.
  - c) Write note on phage mutants.
  - d) Explain general properties of viroids.
  - e) Describe structure of T4 bacteriophage.
  - f) Explain enumeration of viruses by LD50 or ID50 assay.

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