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**BACHELOR OF SCIENCE (CBCS-2018 COURSE)**  
**T. Y. B. Sc. Sem-V : WINTER- 2022**  
**SUBJECT : MICROBIOLOGY : VIROLOGY**

Day : Monday

Time : 02:00 PM-05:00 PM

Date : 12/12/2022

**W-18432-2022**

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 general properties of viruses.
- b) With well labelled diagram explain the structure of TMV.
- c) Explain plaque method of isolation and cultivation of bacteriophages.

**Q.2** Attempt **ANY TWO** of the following : (12)

- a) Explain general properties of viroids.
- b) Discuss tissue culture technique for the isolation and cultivation of animal viruses.
- c) Describe haemagglutination assay 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 influenza virus.
- c) Discuss LD50 and ID50 assay.

**Q.4** Write short notes on **ANY THREE** of the following: (12)

- a) Satellite viruses
- b) Haemagglutination assay
- c) Isolation and cultivation of plant viruses
- d) Adenoviruses

**Q.5** Attempt **ANY FOUR** of the following : (12)

- a) Differentiate between T even and T odd phages.
- b) Describe the structure of viral envelope.
- c) Write note on phage mutants.
- d) Explain general properties of prions.
- e) Describe structure of T4 bacteriophage.
- f) Explain enumeration of viruses by Direct Microscopic Count.

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