

**T.Y.B.SC. SEM – V (2014 Course) : SUMMER - 2019**

**SUBJECT : MICROBIOLOGY : VIROLOGY**

Day : Monday  
Date : 15/04/2019

**S-2019-1007**

Time : 12.00 NOON TO 02.00 PM  
Max. Marks : 40

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw neat and labeled diagrams **WHEREVER** necessary.
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**Q.1** Attempt **ANY TWO** of the following: [10]

- a) Describe one step growth curve in viruses.
- b) Describe general characteristics of viroids and prions.
- c) Enlist different methods for purification of viruses. Explain any one.

**Q.2** Attempt **ANY TWO** of the following: [10]

- a) Name and explain the experiment used to investigate the intracellular development of phage.
- b) Explain structure of Influenza virus.
- c) Describe with suitable examples different types of nucleic acids found in viruses.

**Q.3** Attempt **ANY TWO** of the following: [10]

- a) Differentiate between icosahedral and helical symmetry in viruses.
- b) Describe the role of C<sub>1</sub> protein in maintenance of Lysogeny.
- c) What is deletion mapping?

**Q.4** Write short notes on **ANY FIVE** of the following: [10]

- a) Delayed early genes
- b) Promoters in the  $\lambda$  genome
- c) Prophage
- d) Enveloped viruses
- e) T odd phages
- f) Cell lines in viral cultivation
- g) Non-essential genes

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