

**T.Y.B.SC. SEM – V (CBCS - 2016 Course) : WINTER - 2018**

**SUBJECT: MICROBIOLOGY: VIROLOGY**

Day: Monday  
Date: 15/10/2018

**W-2018-0746**

Time: 03.00 P.M. To 06.00 P.M  
Max Marks. 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw well labelled diagrams **WHEREVER** necessary.
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**Q.1** Attempt any **TWO** of the following: (12)

- a) What are the properties of viruses? Write a note on origin of viruses.
- b) What are satellite viruses? How are they grouped?
- c) With a proper example describe the single and double stranded RNA viruses.

**Q.2** Answer any **TWO** of the following: (12)

- a) Describe in detail the structure of Icosahedral viruses with a suitable example.
- b) Discuss the different methods used for the isolation and cultivation of plant viruses.
- c) Enlist the criteria used for the classification of viruses.

**Q.3** Attempt any **TWO** of the following: (12)

- a) Explain in detail the true state of  $\lambda$  DNA during infection.
- b) Describe in brief reproduction of Influenza virus.
- c) Enlist the various methods used for the cultivation of animal viruses. Discuss the chick embryo technique.

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

- a) Viral capsids
- b) Plaque forming units
- c) Repressors
- d) Viroids

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

- a) Differentiate between lytic cycle and lysogeny
- b) Diagrammatically represent plaque assay method and discuss on how to calculate the titre of virus stock.
- c) Write on – T<sub>4</sub> gene organization.
- d) Diagrammatically represent - Single burst experiment.
- e) How to calculate 50% lethal dose or 50% paralytic dose?
- f) Write note on phage mutants.

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