

(6 pages)

Reg. No. :

Code No. : 20441 E Sub. Code : AEMI 51

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2023.

Fifth Semester

Microbiology – Core

Major Elective I – VIROLOGY

(For those who joined in July 2020 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The term virology was derived from the Latin word 'virus' meaning _____.
(a) toxin (b) poison
(c) food (d) antigen
2. _____ discovered Rabies virus.
(a) Adolf Mayer (b) Edward Jenner
(c) Remlinger (d) John Buist

8. The FMD is a highly contagious viral disease of _____.
(a) Humans (b) Birds
(c) Cattle and pigs (d) Bavers
9. _____ is effective against Herpes viruses, CMV and Adenoviruses.
(a) Ganciclovir (b) Amantadine
(c) Famciclovir (d) Foscarnet
10. Some viruses are not suitable for separation by high speed centrifugation such viruses can be precipitated easily by adding _____ a substance increasing the density of viruses.
(a) PER (b) PEG
(c) PES (d) PEP

PART B — (5 × 5 = 25 marks)

Answer ALL the questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) How are virus components analyzed in the laboratory?
Or
(b) Write notes on Embryonated egg method.

Page 3 Code No. : 20441 E

3. _____ includes all viruses that infect plants.
(a) Phaginae (b) Phytophaginae
(c) Zoophaginae (d) Phycophaginae
4. _____ are proteinaceous infectious viral particles without nucleic acid.
(a) Viroids (b) Satellites
(c) Vira (d) Prions
5. Rapid death of cells or tissue at the site of infection is called _____.
(a) Stripes (b) Streaks
(c) Necrosis (d) Mosaic
6. Tomato leaf infected with Tomato spotted wilt virus has low amount of _____.
(a) Auxin (b) Gibberlin
(c) Proline (d) Cytosine
7. HIV is an enveloped single stranded _____ virus.
(a) DNA (b) Aminoacid
(c) Fat (d) RNA

Page 2 Code No. : 20441 E

12. (a) Give a brief account of the classification of animal viruses based on ICTV system.
Or
(b) Discuss Casjens and King system of virus classification.
13. (a) Write an account of replication of T4 bacteriophages.
Or
(b) Explain the replication mechanism of λ -phage.
14. (a) What are prions? Describe the structure and pathogenesis of prions.
Or
(b) Discuss about Rhabdovirus.
15. (a) Explain various methods used for isolation and purification of viruses in the laboratory.
Or
(b) What is virus assay? Explain various methods available for virus assay.

Page 4 Code No. : 20441 E

[P.T.O.]

PART C — (5 × 8 = 40 marks)

Answer ALL the questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Write about electron microscopic techniques for the detection of viruses.

Or

- (b) What are the molecular diagnostic methods used in virus identification?

17. (a) Write a detail notes on plant virus classification.

Or

- (b) Discuss in detail about bacteriophages.

18. (a) Write a elaborate note on satellites. Give suitable examples.

Or

- (b) What are viroids? How do they differ from viruses? Describe the structure of viroids.

Page 5 Code No. : 20441 E

19. (a) Give a detail notes on the morphology, pathogenesis and laboratory diagnosis of Hepatitis virus.

Or

- (b) Discuss in detail about Corona virus.

20. (a) Explain in detail about viral vaccine.

Or

- (b) Write a detailed account of antiviral agents used to treat viral infections in man.

Page 6 Code No. : 20441 E