

(6 pages)

Reg. No. :

Code No. : 6509

Sub. Code : ZMBM 23

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Second Semester

Microbiology - Core

VIROLOGY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Virus contains _____ as nucleic acid
 - (a) Only RNA
 - (b) Only DNA
 - (c) Either DNA or RNA
 - (d) Both DNA and RNA

2. _____ is intracellular obligate parasite
 - (a) Bacteria
 - (b) Virus
 - (c) Fungi
 - (d) Algae
3. _____ is filamentous phage
 - (a) T4 phage
 - (b) Lambda phage
 - (c) M13 phage
 - (d) MU phage
4. The prophage can be separated from bacterial chromosome and entre the lytic cycle is called
 - (a) Induction
 - (b) Excision
 - (c) Insertion
 - (d) Separation
5. Which of the following plant virus has DNA in it?
 - (a) Tobacco mosaic virus
 - (b) Potato mosaic virus
 - (c) Tomato mosaic virus
 - (d) Cauliflower mosaic virus
6. Plant viruses may be cultivated in
 - (a) Tissue culture
 - (b) Whole plant
 - (c) Culture of separated cell
 - (d) All of these

7. Which of the following oncogenic viruses was first detected?
- Rous sarcoma virus
 - Epstein -Barr virus
 - Herpes simplex virus type - 2
 - Human T-cell leukemia virus
8. Which of the following is the largest virus?
- Herpes virus
 - Arbo virus
 - Mumps virus
 - Pox virus
9. Viroid's have
- D.S - DNA enclosed by protein
 - S.S - DNA not enclosed by protein
 - S.S - RNA not enclosed by protein
 - D.S - RNA enclosed by protein
10. Measles vaccine is administered
- Intravenously
 - Intramuscularly
 - Intradermally
 - Subcutaneously

PART B — (5 × 5 =25 marks)

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

Each answer should not exceed 250 words.

11. (a) Write short notes on nomenclature of viruses.
- Or
- (b) Narrate the evolution of virus in detail.
12. (a) Write short notes on replication of T4 phage.
- Or
- (b) Write down the information of Mu phage.
13. (a) Explain in detail about structure and molecular mechanism of vector-mediated cauliflower mosaic virus transmission.
- Or
- (b) Write a short note on the common viral diseases of tomato and explain its pathogenicity and symptoms.
14. (a) Explain briefly about replication of adenovirus.
- Or
- (b) Narrate the pathogenicity and physical nature of paramyxovirus.

15. (a) What is vaccines? Explain the different types of live attenuated vaccines.

Or

(b) Write a short note on virusoids and give some examples for virusoids.

PART C — (5 × 8 = 40 marks)

Answer ALL the questions, choose either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Give a detailed account on classification of viruses based on nucleic acid and mRNA synthesis.

Or

(b) Discuss about the taxonomy of virus in detail.

17. (a) Describe the general characteristics and replication of phage M13.

Or

(b) Discuss the structural organization and life cycle of Lambda phages.

18. (a) Write an essay on viral disease of sugarcane.

Or

(b) Write in detail about morphology and replication of Tobacco mosaic virus.

Page 5 Code No. : 6509

19. (a) Discuss in detail about life cycle and pathogenicity of measles virus.

Or

(b) Explain detail about the Tumor viruses of human.

20. (a) Give detailed account on viroid's and prions. And give some examples for diseases caused by viroids.

Or

(b) Make a brief note on cyanophages. And neatly sketch the structure of cyanophages.

Page 6

Code No. : 6509