

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
MSc DEGREE EXAMINATION MAY 2022
(Second Semester)

Branch – APPLIED MICROBIOLOGY

APPLIED VIROLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

1. Protein subunit of capsid is composed of
 - (i) Spike
 - (ii) Envelop
 - (iii) Neurominidase
 - (iv) Capsomeres
2. Rotavirus belongs to
 - (i) Arenoviridae
 - (ii) Retroviridae
 - (iii) Reoviridae
 - (iv) Orthoviridae
3. Which of the following is a proteinaceous infectious particle causing scrapie kuru disease ?
 - (i) Pox virus
 - (ii) Viroid
 - (iii) Prion
 - (iv) Influenza virus
4. Example of Satellite virus is
 - (i) Picorna virus
 - (ii) Tobacco mosaic virus
 - (iii) Rice tungro
 - (iv) Tobacco rattle virus
5. The viral genome integrated in to host genome is called
 - (i) Plasmid
 - (ii) Virion
 - (iii) Temperate phage
 - (iv) None

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

6. a Explain the viral components and quantification of viruses.
OR
b Explain the inclusion bodies caused by viruses with examples.
7. a Explain the pathogenesis and laboratory diagnosis of mumps virus infections.
OR
b State the pathogenesis and diagnosis of rota virus.
8. a Discuss the lesions caused by Herpes simplex virus and their laboratory diagnosis
OR
b Describe the structure of Hepatitis B virus and its mode of transmission.
9. a Explain the common disease symptoms of plant diseases caused by viruses.
OR
b Explain the structure and transmission of cauliflower mosaic virus.
10. a Discuss the steps that occur during a lytic infection process.
OR
b Explain the replication mechanism of T 7 phage.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Explain the various methods of cultivation of viruses.
OR
b Elucidate the antiviral agents and their usage on virus control.
- 12 a Classify the LHT system of virus classification and give examples for each family.
OR
b Analyze the general features and mechanism of oncogenesis of RNA tumor viruses.
- 13 a Elucidate the structure, clinical manifestations and diagnosis of adenovirus infections.
OR
b Explain the antiviral vaccines and their significances.
- 14 a Interpret the various control measures of plant viral diseases.
OR
b Explain the classification of plant viruses with examples.
- 15 a Elucidate the morphological structure and lysogenic cycle of λ bacteriophage.
OR
b Explain one – step growth curve of a bacteriophage.

Z-Z-Z

END