12. Explain the physical and chemical methods for the assay of viruses. Write the note on Tissue Culture and Hybridization.

13. Briefly explain the differences between acute and persistent viral infections on a clinical and molecular level. Describe ELISA techniques used in the detection of HIV.

A

Printed Pages : 4

(20623)

Roll No. 2006861280l0

B.Sc. (Biotech.)- III Year

NS-3475

B.Sc. (Biotechnology) IIIrd Semester

Examination, June-2023

MOLECULAR VIROLOGY

(B-303)

B.Sc. (Biotech.)

Time : Three Hours] *[Maximum Marks : 75*

Note : Attempt all the sections as per instructions.

Section–A

(Very Short Answer Questions)

Note : Attempt **all** questions. Each question carries 3 marks. Very Short answer is required not exceeding 75 words.

1. Viroids and Virusoids

2. Structure and Function of viruses

3. Bacteriophage

4. Electron Microscopy

5. Phage display

Section–B

(Short Answer Questions)

Note : Attempt any **two** questions. Each question carries 7.5 marks. Short answer is required not exceeding 200 words.

6. Explain with suitable examples of classification of viruses based on the presence of nucleic acid and diagrammatically explain the replication of genome of Vaccinia virus (or) Retro virus.

7. What determines the symptoms of viral infections disease ? Use examples from human medicine.

8. Write about the different methods to diagnose virus infection with suitable examples.

Section–C

(Detailed Answer Questions)

Note : Attempt any **three** questions. Each question carries 15 marks. Detailed answer is required.

9. Mention some cell surface molecules used by animal viruses as receptors. What is the antibody dependent enhancement of infectivity ? What are the functions of structural and non-structural viral proteins with suitable examples.

10. Briefly describes the basic steps in the viral life cycle and describe the steps from extracellular viral particle to intracellular genome for an animal virus.

11. What is the mechanism behind the viral infection diagnosis by using immunosorbent electron microscopy techniques ? How PCR and sequencing molecular method used to diagnose viral infection.