

NS-3475 (CV)

B.Sc. Biotechnology IIIrd Semester

Examination, June- 2020

MOLECULAR VIROLOGY

(B-303)

(B.Sc. Biotech)

Time : Two Hours] [Maximum Marks : 75

Note: Attempt any **four** questions. **All** the questions carry equal marks.

1. Describe the major steps in replication of a DNA virus.
2. Discuss the principle, procedure and applications of fluorescent microscopy.
3. Write detailed note on :
 - (a) Detection of virus growth in tissue culture
 - (b) Immuno-electrophoresis and its applications

4. Enumerate five important Plant diseases caused by virus. Discuss etiology, disease systems and disease cycle of leaf curl of Papaya.
5. Write short note on the following :
 - (i) Biosafety-level-3
 - (ii) Baltimore classification
 - (iii) Epidemiology of HIV in India
 - (iv) Slow virus diseases
 - (v) Viral gastroenteritis
6. Enumerate the antigen-antibody reactions and describe the principle and types of enzyme linked Immunosorbant assay (ELISA).
7. Classify the Hepatitis viruses. Discuss in detail the lab diagnosis of acute viral hepatitis.
8. Differentiate between the following :
 - (i) Prions and Virioids
 - (ii) Prokaryotes and Eukaryotes
 - (iii) Satellite virus and Satellite RNA
 - (iv) Viroid and Virusoid.

(v) Lytic and Lysogenic Phages

9. Write detailed note on the following :

(a) PCR and its applications

(b) Immunosorbent electron microscopy (ISEM)

(c) Requirements of molecular virology laboratory

10. Write in detail on in-vitro tissue culture methods. Include a note on nutritional requirements with cytopathic effects. _____