

The West Bengal University of Health Sciences
B.Sc. in Medical Microbiology 3rd Semester May - June, 2023

Examination

Subject : Virology



Time : 2 hrs.

Full Marks : 50

Attempt all questions

1. Tick the correct answer : 10 x 1
- a) Which of the following process is absent in the virus?
 - i) Mutation.
 - ii) Replication.
 - iii) Production of energy.
 - iv) All.
 - b) What is the phage that attacks a host cell but does not destroy it?
 - i) Temperate Phage.
 - ii) Sexduction.
 - iii) Phycophage.
 - iv) Virulent Phage.
 - c) A virus is made up of _____.
 - i) Protein coat and nucleic acid.
 - ii) Protein coat and mitochondria.
 - iii) Nucleic acid and cell membrane.
 - iv) Nucleic acid, cell wall, and cell membrane.
 - d) The rabies virus contains :
 - i) dsDNA.
 - ii) ssDNA.
 - iii) dsRNA.
 - iv) ssRNA.
 - e) Viroids have :
 - i) ssRNA not enclosed by a protein coat.
 - ii) ssRNA enclosed by a protein coat.
 - iii) dsDNA not enclosed by a protein coat.
 - iv) dsRNA enclosed by a protein coat.
 - f) Causative of Chickenpox is :
 - i) Bacteriophage T-2.
 - ii) Varicella virus.
 - iii) SV-40 virus.
 - iv) Adenovirus.
 - g) Which of the following is not an RNA virus?
 - i) Retrovirus.
 - ii) Enterovirus.
 - iii) Rhabdovirus.
 - iv) Adenovirus.
 - h) The process of readily counting Bacteriophages is called :
 - i) Immunoassays.
 - ii) ELISA.
 - iii) Plaque assays.
 - iv) Tissue cell culture.
 - i) Which of the following is not the laboratory diagnosis of poliovirus?
 - i) RNA in the fecal sample.
 - ii) IgM antibodies in sera.
 - iii) IgG antibodies in sera.
 - iv) IgA antibodies in sera.
 - j) The genetic constituent of viruses is _____.
 - i) RNA.
 - ii) DNA.
 - iii) ss DNA.
 - iv) DNA or RNA.
2. Answer **any four** of the following questions : 4 x 2
- a) State the morphology of poliovirus?
 - b) Define prophage.
 - c) State the function of vpu gene of HIV.
 - d) What is herpes labialis?
 - e) Name two viruses under Paramyxoviridae family.
 - f) Name two strains of coronavirus.
3. Answer **any four** of the following questions : 4 x 4
- a) What is antigenic drift? What is latent period in one step growth curve? 2+2
 - b) State the route of entry of different Herpes virus. 4
 - c) Describe the pathogenesis of poxvirus. 4
 - d) How do you diagnose the mumps virus in the laboratory? 4
 - e) Discuss different types of antigen present in mumps virus. 4
 - f) State the events involved in viral maturation. 4
4. Answer **any two** of the following questions : 2 x 8
- a) State the different stages of lysogenic life cycle. Differentiate between *Myoviridae*, *Siphoviridae* and *Podoviridae* family bacteriophages? 5+3
 - b) Discuss morphological and antigenic structure of HIV. 4+4
 - c) Write short notes on prion and oncogenic virus. 4+4