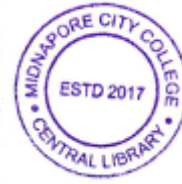


The West Bengal University of Health Sciences
B.Sc. in Medical Microbiology 3rd Semester March-April, 2026 Examination

Subject : Virology



Full Marks : 50

Time : 2 hrs.

Attempt all questions

10 x 1

1. Tick the correct answer :
 - a) SARS COV-2 virus contains which of the following enzyme?

i) RNA dependent DNA polymerase	i) RNA dependent RNA polymerase
iii) DNA dependent DNA polymerase	iv) DNA dependent RNA polymerase
 - b) Which of the following virus is used as vehicle for gene therapy?

i) Herpes Simplex Virus	ii) Adenovirus	iii) Cytomegalovirus	iv) Rabies virus
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 - c) Which of the following vaccine is a killed vaccine?

i) Sabin polio vaccine	ii) Salk polio vaccine	iii) BCG	iv) None of the above
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 - d) Antigenic drift in Influenza Virus results from mutation in:

i) Haemagglutinin genes	ii) Neuraminidase genes	iii) Both of the above	iv) None of the above
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 - e) Which of the Avian influenza virus strain was first isolated from a human case of Avian Influenza in 1997 in Hong Kong?

i) H2N2	ii) H3N2	iii) H5N1	iv) H5N3
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 - f) Koplik's spots on the buccal mucosa is a characteristic feature of:

i) Mumps	ii) Measles	iii) Rubella	iv) Respiratory Syncytial Virus
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 - g) gp120 and gp41 are the characteristic feature of viral attachment and entry of which virus?

i) HIV	ii) SARS COV-2	iii) HBV	iv) HAADV
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 - h) Which of the following virus is bullet shaped?

i) Herpes virus	ii) Variola virus	iii) Rabies virus	iv) Parvo virus
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 - i) Which of the following Hepatitis virus may cause hepatic carcinoma?

i) Hepatitis A virus	ii) Hepatitis C virus	iii) Hepatitis E virus	iv) Hepatitis G virus
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 - j) Which of the following viral antigen is present in the envelope of Hepatitis B virus?

i) HBsAg	ii) HBcAg	iii) HBeAg	iv) None of the above
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2. Answer **any four** of the following questions : 4 x 2
 - a) Describe the prophylaxis against Influenza.
 - b) Write about the vaccine for prevention of poliomyelitis.
 - c) What do you mean by phage typing and phage assay?
 - d) What are active and passive immunization?
 - e) What is Virusoid? Give an example.
 - f) What is AAV? Name its helper virus.

3. Answer **any four** of the following questions : 4 x 4
 - a) Describe the One-step growth curve with diagram.
 - b) Difference between lytic and lysogenic cycle.
 - c) Write about the symmetry of virus.
 - d) Name two DNA viruses and two RNA viruses.
 - e) Name one brick, rod (helical), spherical and filamentous shaped virus.
 - f) Write down the general characteristics of virus.

4. Answer **any two** of the following questions :
 - a) Describe the morphology and pathogenesis of Polio virus infection? 2 x 8
 - b) Describe the morphological structure, genes and genomes organization of Adenovirus. 4+4
 - c) Describe the Lytic cycle of bacteriophage. What is Transduction process? 4+4
- 5+3