B.Sc. (CBCS Pattern) Sem-V

USMBT-11 : DSE-III - Microbiology-I : (Virology - IV)

P. Pages : 2 **GUG/W/22/13108**

Time : Three Hours * 1 2 1 7 * Max. Marks : 50

---

1. Explain in detail Isolation and purification of virus. **10**

OR

a) Write down general properties of viruses.

b) Explain the Icosahedral symmetry of virus with example.

c) Explain the cell line culture technique for the cultivation of virus.

d) Write a note on viroid's.

2. Explain the lytic and lysogenic cycle in lambda phage. **10**

OR

a) Explain the persistent and non-persistent mode of viral transmission.

b) Explain the classification of different group of viruses.

c) Write a note on terminal redundancy in case of T_4 phage.

d) Explain in brief double stranded genome of hepatitis B.

3. Explain in detail oncogenes and proto-oncogenes. **10**

OR

a) Explain the types of oncogenic DNA virus.

b) Explain the use of viral vector in cloning.

c) What are interferon explain.

d) What are antiviral compound explain with one example.

4. What are antiviral compound explain their mode of action. **10**

OR

a) Write down the mode of action of interferon.

b) Give the general principle of viral vaccination.

c) Write a note on Gene therapy.

d) Explain in brief phage display technique.

5. a) Define prions. **10**

b) Write down the name of any one technique for purification of virus

c) What are virusoids.

d) What is prophage.

e) What is eclipsed phase

f) Write full form of HIV

g) Define oncogene

h) What are interferon.

i) Give any one example of viral vector.

j) Give two example of antiviral compound.

k) Give any one use of viral vector.

l) What is live vaccine give example.

****