

⇒ Viruses are infectious agents with both-living and non-living characteristics.

⇒ They can infect animals, plants and even other micro-organisms.

⇒ viruses that infect only Bacteria are called Bacteriophages, and those that infect only fungi are termed as mycophages.

⇒ There are even some viruses called virophages that infect other viruses.

⇒ They reproduce at a fantastic rate, but only in living host cells.

⇒ They can mutate.

⇒ They are acellular, i.e. they contain no cytoplasm or cellular organelles.

⇒ They carry out no metabolism on their own, and must replicate using the host cell's metabolic machinery.

⇒ In other words, viruses don't grow and divide. New viral components are synthesized and assembled within the infected host cell.

⇒ The vast majority of viruses possess either DNA or RNA but not both.

⇒ Virus are totally dependent on a host-cell for replication. (i.e. they are strict-intracellular parasites).

⇒ Viral components must assemble into complete viruses (virions) to go from one host cell to another.

⇒ They cannot be grown in synthetic-culture media.

⇒ Viruses lack metabolic machinery of their own and are totally dependent on their host cell for replication.

⇒ Animal viruses are normally grown in animals, embryonated eggs, or in cell-cultures, where in animal host cells are grown in a synthetic medium, and the viruses are then grown in these cells.

⇒ Viruses are infectious agents with both living and non-living characteristics.

⇒ Living Characteristics of viruses include the ability to reproduce - But only in living host cells - and the ability to mutate.



⇒ Non-living Characteristics include the fact that they are not cells, have no cytoplasm or cellular organelles.



⇒ They carry out no metabolism on their own and therefore must replicate using the host cell's metabolic machinery.



⇒ All viruses have a capsid for head region, that contains its genetic material.



⇒ The capsid is made of proteins and glycoproteins.



⇒ Capsid construction varies greatly among viruses, with most being specialized for a particular virus's host organism.



⇒ Some viruses, mostly of the type infecting animals, have a membranous envelope surrounding their capsid.



⇒ This allows viruses to penetrate host-cells through membrane fusion.



⇒ The viruses genetic material rest's inside the capsid.

⇒ viruses spread in many ways. one transmission pathway is through disease-bearing organisms known as vectors.

⇒ for e.g. viruses are often transmitted from plant to plant by insects that feed on plant sap, such as aphids.

⇒ viruses in animals can be carried by blood-sucking insects.

⇒ Influenza viruses are spread by coughing and sneezing.

⇒ HIV is one of several viruses transmitted through sexual contact and by exposure to infected blood.

⇒ Host Range:- The variety of host cells that a virus can infect is called its "Host Range."

⇒ It is capable of infecting many viral infections in animals, provoke an immune response that usually eliminates the infecting virus.

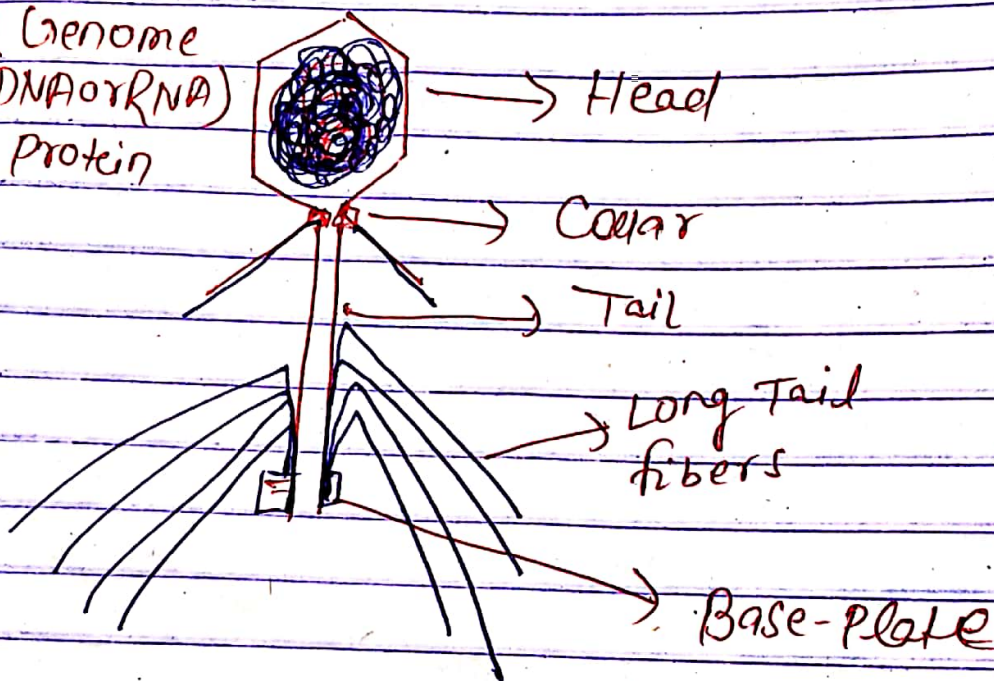


⇒ Immune responses can also be produced by vaccines, ~~which~~



⇒ Several antiviral drugs have been developed to recover viral-disease like- Interferon.

- Genome (DNA or RNA)
- Protein



2-Dimensional Str. of Virus.