

Virus:

- Viruses are the micro-organisms which are strict or obligate parasites of animals or plant cells.
- Many of the viruses are also parasites on bacteria.
- A large number of viruses cause diseases in plants and animals.

Characteristics Of Virus:

- A virus consists of two components, a protein coat and a core of nucleic acid which is either DNA or RNA.
- DNA viruses are called adenoviruses and RNA viruses are called retroviruses.
- The shape of a virus is due to its protein coat.
- Viruses are of many shapes i.e. rods, spherical, hexagonal or icosahedral.
- Sometimes their shape is complicated.
- Virus replicate inside a living cell and many viruses are synthesized along with their protein coats and nucleic acid.
- The nucleic acid contains instructions for the shape of the virus.

Diseases Caused By viruses:

- i) Polio
- ii) AIDS
- iii) Smallpox
- iv) Measles
- v) Hepatitis

Bacteria:

Characteristics Of Bacteria:

- Bacteria are unicellular prokaryotic organisms which generally divide by transverse binary fission.
- They possess rigid cell walls and act as pathogens
- Nucleus is not well organised
- No definite chloroplast, chlorophyll is dissolved in chromoplasm.
- There are three forms of bacteria which are:
 - i) Round called Cocci
 - ii) Rod like called Bacilli
 - iii) Spiral called Spirilla

Classification Of Bacteria According To Mode Of Nutrition:

According to mode of nutrition, there are three types of Bacteria:

a) Parasitic:

- Devoid of chlorophyll
- Are heterotrophic and get food from living animals and plants

b) Saprophytic

- Lack chlorophyll hence cannot prepare their own food.
- Get food from dead organic remains

c) Autotrophic

- Contain chlorophyll
- Can synthesis food by photosynthesis
- Few get their food by chemosynthesis

Reproduction In Bacteria

- i) **Vegetative:** By Binary Fission
- ii) **Asexual:** By Formation of Endospores
- iii) **Sexual:** By Conjugation