

# BIOLOGICAL CLASSIFICATION

## IMPORTANT ONE LINERS

- ① → **Aristotle** was the earliest to attempt a more scientific basis of classification.
- ② → Aristotle divided plants on the basis of simple morphological characters into trees, shrubs and herbs.
- ③ → Aristotle divided animals into two groups → inhaled blood and those which did not.
- ④ → **R. H. Whittaker** proposed the **Five Kingdom classification**.
- ⑤ → The main criteria used by R. H. Whittaker for classification includes cell structure, thallos organization, mode of nutrition, reproduction and phylogenetic relationships.
- ⑥ → **Bacteria** are **sole member of** Kingdom Monera,
- ⑦ → **Archaeobacteria** = live in some of the most harsh habitats.
  - (1) Halophiles = Anaerobes
  - (2) Hot springs (thermoacidophiles) : Aerobic in nature
  - (3) Marshy areas [Methanogens] :- Anaerobic in nature
- ⑧ → **Methanogens** are present in the gut of several ruminant animals.
- ⑨ → **Cyanobacteria** have chlorophyll 'a' similar to green plants and are **photosynthetic autotrophs**.
- ⑩ → **Plasmids term** given by Lederberg
- ⑪ → Plasmids are extra chromosomal small circular double stranded DNA molecules.
- ⑫ → **Episomes** = When plasmids are integrating into the bacterial DNA chromosomes called episomes.
- ⑬ → **Mycoplasma** → joker of the plant kingdom.
- ⑭ → All **single cell eukaryotes** are placed under protista

- 15) → **Cyrosophytes** includes diatoms and golden algae
- 16) → **Diatoms** are chief producers of the ocean.
- 17) → **Dinoflagellates** also known as Fire Algae, are mostly marine and photosynthetic
- 18) → Slime moulds are **saprophytic protists**.
- 19) → All protozoans are heterotrophs and live as predators or parasites.
- 20) → **Entamoeba histolytica** are endo parasites.
- 21) → Sporozoa include diverse organisms that have an infectious spore-like stage in their life cycle.
- 22) → A unique kingdom of heterotrophic organisms.
- 23) → Source of Antibiotics: - **Penicillium**.
- 24) → **The network of hyphae** is called mycelium.
- 25) → Symbiotic association of fungi with roots of higher plants as **Mycorrhiza**.
- 26) → Reproduction in fungi can take place by :-  
 \* Vegetative means → fragmentation, fission and budding  
 \* Asexual reproduction → by spores called conidia or sporangiospores or zoospores.
- 27) → Fusion of gametes protoplasm's between two motile or non-motile gametes called **plasmogamy**.
- 28) → Fusion of two nuclei called **karyogamy**.
- 29) → **Members of phycmycetes** are found in aquatic habitats
- 30) → The **mycelium** is aseptate and coenocytic
- 31) → Conidia on germination produce mycelium.
- 32) → **Deuteromycetes** are commonly known as imperfect fungi because only the **asexual or vegetative phases** of these fungi are known.
- 33) → Kingdom Plantae includes all eukaryotic chlorophyll containing organisms.

34 → Kingdom Animalia is characterized by heterotrophic eukaryotic organisms that are multicellular and their cells lack cell walls.

35 → The viruses are non-cellular organisms that are characterized by having an inert crystalline structure outside the living cell.

36 → The name virus that means venom or poisonous fluid was given by Pasteur D.T. Ivanowsky [1892].

37 → A virus is a nucleoprotein and the genetic material is infectious.

38 → Virioids lack the protein coat that is found in viruses.

39 → The RNA of the viroid was of low molecular weight.

40 → Lichens are symbiotic associations that means mutually useful associations between algae and fungi.