

# High Yield Hints - PLANT KINGDOM

## THALLOPHYTA

### PHYLA

1. Cyanophyta	Blue green algae	Eg. Nostoc , Anabaena.
2. Euglenophyta	Euglenoids	Eg. Euglena.
3. Chlorophyta	Green algae	Eg. Chlamydomonas, Spirogyra.
4. Chrysophyta Pinnularia.	Yellow green algae, Golden brown algae, Diatoms.	Eg. Mallomonas,
5. Phaeophyta	Brown algae	Eg. Ectocarpus, Laminaria.
6. Pyrrohta	Cryptomonads, Dinoflagellates .	Eg. Gymnodinium
7. Rhodophyta	Red algae	Eg. Polysiphonia, Gelidium.
8. Schizomycophyta	Bacteria	
9. Myxomycophyta	Slime moulds	
10. Eumycophyta	True fungi	

#### Divided into 4 classes

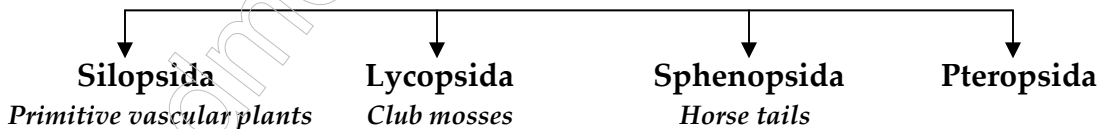
1. Phycomycetes Eg. Rhizopus, Albugo.
2. Ascomycetes Eg. Penicillium, Aspergillus.
3. Basidiomycetes Eg. Puccinia, Ustilago.
4. Deuteromycetes Eg. Fusarium, Alternaria.  
( Fungi imperfecti )

## SUB KINGDOM : EMBRYOPHYTA

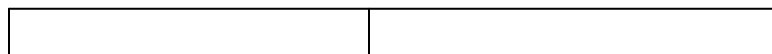
Divided into 2 phyla.

1. Phylum Bryophyta or Atracheata **divided into 3 classes.**
  - A. Musci ( Mosses ) Eg. Funaria, Pogonatum.
  - B. Hepaticae ( Liver worts ) Eg. Riccia, Marchantia.
  - C. Anthocerotae ( Horn worts ) Eg. Anthoceros, Notothylas.
2. Phylum Tracheophyta or Tracherata Vascular plants. Divided into 4 sub phyla.

### Tracheophyta



### Pteropsida



Class Filicinae

Gymnospermae

Angiospermae

### **Class - Gymnospermae**

- 2 sub classes
1. Cycadophytae
  2. Coniferophytae

### **Class – Angiospermae**

- 2 sub classes
1. Dicotyledonae
  2. Monocotyledonae

## *CHARACTERS OF PLANT GROUPS*

### **CRYPTOGAMAE**

Non flowering plants – divided into Thallophyta, Bryophyta and Pteridophyta.

### **THALLOPHYTA**

1. Body not differentiated into roots, stem and leaves.
2. Body is called Thallus.
3. Vascular tissue absent.
4. Sex organs mostly unicellular.
5. No multi cellular embryo.
6. Alternation of generation is not distinct.

### **ALGAE**

1. Phycology is the study of Algae.
2. Vegetative structure is unicellular and motile in Chlamydomonas.
3. Macrocystic and Nereocystis are largest algae.
4. Cell wall is composed of cellulose and Pectose.
5. Cell wall of Blue green algae is composed of Mucopetide or Muroin or Peptidoglycan.
6. Sexual reproduction is primitive.
7. Sexual reproduction is totally absent in Blue green algae.

### **FUNGI**

1. study of Fungi is Mycology.
2. P.A.MICHELI is the founder of Mycology and De Bary is the Father of Modern Mycology.
3. Hyphal wall is composed of Chitin but in Rhizidiomyces cell wall contains cellulose and chitin.
4. Reserve food is Glycogen.
5. *Albugo and Puccinia* are Obligate parasites living in the cells of hosts.
6. *Phythium and Fusarium* are Facultative parasites living as Saprophytes.

7. *Mucor and Rhizopus* are Obligate Saprophytes living on dead matter.
8. *Ustilago or Smut fungus* is a Facultative Saprophyte living as parasites but can become saprophyte.
9. Sexual reproduction is absent in **Deuteromycetes or Funfi imperfecti**.
10. In *Synchytrium*, plant body is unicellular and become a reproductive structure ( Holocarpic Fungi )
11. In Eucarpic Fungi, a part of the Thallus is used as reproductive structure. *Egs. Penicillium, Aspergillus.*

## LICHENS

1. Fungal partner is Mycobiont and Algal partner is Phycobiont.
2. Based on Growth, Lichens are classified into

**A. Crustose lichens - Tallus adhered on to the rocks.**

*Egs. Acarospora, Basidia, Bullia, Lecanora, Lecidea, Rhizocarpon.*

**B. Foliose lichens -Thallus is leaf like**

Egs. Parmelia, Heterodermia, Physia, Dermatocarpon, Collema, Leptogium.

**C. Fruticos lichens - Thallus lobes are branched and thread like**