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## BIO102 ASSIGNMENT

1.

### Eichler's grouping of 1883

| <b>DIVISION</b> | <b>CLASS</b>   |
|-----------------|--|
| Thallophyta     | Phycotinae (Algae)<br>Mycotinae (Fungi)  |
| Bryophyta       | Hepaticae<br>(Liverworts)<br>Musci (Mosses)  |
| Pteridophyta    | Psilotinate<br>(Psilotum)<br>Lycopodinae<br>(Lycopodium,<br>Selaginella)<br>Equisetinae<br>(Horsetails)<br>Filicinae (Ferns) |
| Spermatophyta   | Gymnospermae<br>(Gymnosperms)<br>Angiospermae<br>(Angiosperms)   |

2.

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### IMPORTANCE OF ALGAE TO MAN

- It serves as food for people
- The red algae provide agar and carrageen used for the preparation of various gels used for scientific research
- It's contains high iodine content which prevents goitre
- It serves as thickening agents in ice cream and shampoo
- Alginic acid from the brown algae is used to stabilize emulsions and suspensions.

3.

### Unicellular form of Algae

Chlamydomonas represents the unicellular and module forms of green algae.

- It's found in stagnant water.
- It has the flagella which enables movement
- The cell is bounded by a cellulose cell wall
- The stigma is for photoreception

4.

### REPRODUCTION

Reproduction can either be vegetative (asexual) or sexual. Vegetative results in the production of daughter cells in which the amount and quality of genetic material in the nucleus of the mother cell is maintained in the daughter cells. The amount of genetic material in the mother cell nucleus of  $n$ , the daughter cells also have  $n$  quantity of genetic material. The mitotic division maintains the quality and quantity of genetic material.

#### *Sexual reproduction*

It involves union of sex cell, aggregation of cells in a colony occurs under favourable conditions. These cells pair by their posterior end.

This pairing is said to be isogamous because the pairing cells(gametes) are morphologically identical .

5. The colonial forms in Algae

❖ **PANDORINA**

❖ **VOLVOX**

**Pandorina**

Sexual  
reproduction is  
anisogamous  
Unicellular motile  
thallus  
It's a genus of  
green algae

**Volvox**

Sexual  
reproduction is  
oogamous  
Multicellular motile  
thallus  
It's complex form  
of pandorina