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Dept: Medicine and Surgery

Matric no: 19/mhs01/282

Course: Bio102

1.) Eichler's grouping of 1883

Division: Thallophyta

Class: •Phycotinae (Algae)

•Mycotinae (Fungi)

Division: Bryophyta

Class: •Hepaticae (Liverworts)

•Musci (Mosses)

Division: Pteridophyta

Class: •Psilotinate (Psilotum)

•Lycopodinae(Lycopodium,
Selaginella)

•Equisetinae (Horsetails)

•Filicinae (Ferns)

Division: Spermatophyta

Class: •Gymnospermae(Gymnosperms)

•Angiospermae (Angiosperms)

2.) Importance of algae to man

- ~ It's contains high iodine content which prevents goiter.
- ~ Alginic acid from brown algae is used to stabilize emulsions.
- ~ serves as thickening agents in ice cream and shampoo.
- ~ It serves as food for people.

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 of unicellular algae

Reproduction can either be asexual or sexual

Asexual: it is 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 is the 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 of algae

~ Pandorina & Volvox

~ in Pandorina, sexual reproduction is anisogamous while it is oogamous in Volvox

~ Unicellular motile thallus in pandorina, while multicellular motile thallus

~ For pandorina, It's a genus of green algae

while for Volvox, It's complex form of pandorina.

6.) Complex form in the Algae: Fucus

Fucus is a genus of the brown Algae whose species are found on rocks in the intertidal zones of the sea shores. The body of the plant is flattened, dichotomously-branched thallus with a mid rib, a vegetative apex and a multicellular disk with which plant is attached to rock surface. The body has air bladders which is believed to aid the plant to float on the water. It varies in size from a few centimetres to about 2 metres in length.

Sexual reproduction is oogamous, sex cells are produced in conceptacles which have openings (ostioles) on the surface of the thallus.