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**1.) CLASSIFICATION OF PLANTS ACCORDING TO EICHLER’S GROUPING 1833**;

. thallophyta: phycotinae(algae) , mycotinae(fungi).

. Bryophyta: Hepaticae(liverworts), Musci(Mosses).

. Pteridophyta: Psilotinate(psilotum) , Lycopodinae(Lycopodium, selaginella), Equisetinae(Horsetails), filicinae(Ferns)

. Spermatophyta: Gymnospermae( gymnosperm), Angiospermae(angiosperm)

2.) **Importance of algae to man;**

a. They serve as food for fish.

b. Certain species are harvested for food and cosmetics in far east.

C. It serves as food for people and livestock, thickening agent in ice-cream and shampoo, drugs to ward off diseases.

d. Brown algae yield alginic acid which is used to stabilize emulsions and suspensions; found in products such as syrup, ice-cream and paints.

e. Algar is used in food Industry to stabilize pie fillings and preserve canned meat and fish. Carrageenan is also used as a thickening and stabilizing agent in products.

3.) a. They are found in stagnant water. ( e.g chlamydomonas)

b. Flagella is the structure of mobility.

c. The cell is bounded cellulose wall and contains organelles.

d. The nucleus carries the genetic programme of the cell.

e. The stigma is photoreception.

f. The manufactured sugar is stored as starch in the pyrenoid.

e. The mitochrondria mediate the elaboration of energy molecules.

4.) It reproduce asexually(vegetative reproduction) and sexually.

Vegetative reproduction : 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 cell. The type of cell division that maintains the quantity and quality of cells is MITOTIC DIVISION

Sexual reproduction : certain conditions may trigger the haploid daughter cells to undergo sexual reproduction. Instead of spores the haploid daughter cells form gametes that have two different strains that are structurally similar and are positive and negative strains. The final product is usually four cells.

5.) Volvox shows more complex forms than Pandorina.

b. there are more cells in the colony of volvox numbers may run into thousands and connected by cytoplasmic strands that run through cells while the colony consists of 16 cells in pandorinaand are attached to one another.

c. sexual reproduction is oogamous in volvox while sexual reproduction in pandorina is by anisogamous paring.

6.) A more complex form of algae is a genus of brown algae called FUCUS. It is often found in rocks in the intertidal zones of the sea shores. The plant body is flattened , dichotomously-branched thallus with a mid-rib,a vegetative apex, a reproductive apex at maturity and multicellular disk( hold fast) with which plant is attached to the rock surface.it also has air bladders( aids the plant to float on water) . Various species of focus exist. Sexual reproduction is oogamous. They vary in terms of whether the sex cells are found in same chamber or different sexual chamber or plant bodies.