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ASSIGNMENT

1. Classification of plants according to Eichler 1883

In 1883, A.W Eichler gave a system of classification for the whole plant kingdom. It is a traditional system as well as a phylogenetic system of classification of plants. He classified the plant kingdom into two sub-kingdoms. They are Cryptogamae and Phanerogamae.

- a. The cryptogams are flowerless seedless plants. They are simple plants like algae, mosses and ferns which do not produce flowers, fruits and seeds. Cryptogams are considered as lower plants.
- b. Phanerogams are seed bearing plants. So they are also known as spermatophytes (angiosperm & gymnosperm). They are higher plants. The plant body is differentiated into roots, stems, and leaves with well-developed vascular system.

2. Importance of Algae to Man.

- a. It is used as fertilizer.
- b. It is a source of agar in the production of desserts.
- c. Manufacture of soaps & alums.

- d. Ornamental uses.
 - e. Direct use of algae as food for man.
 - f. Manufacture of iodine.
 - g. Manufacture of medicines & minerals.
 - h. Manufacture of alginic acid, which is used in the production of dyes.
 - i. Used in the removal of sludge from our water resource.
3. Unicellular form of algae, Chlamydomonas represents the unicellular and module forms of green algae. It formed 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. Chlamydomonas possesses red eye spots for photosensitivity and reproduces both asexually (vegetative) and sexually. The cells of most Chlamydomonas species are moreless oval and feature a no cellulosic membrane (theca), a stigma (eyespot), and a usually cup-shaped chloroplast. Although photosynthesis occurs, nutrients also may be absorbed through the cell surface. Chlamydomonas's asexual reproduction occurs by zoospores; sexual reproduction through isogamy.
5. Difference between Pandorina & Volvox.

VOLVOX	PANDORINA
Sexual reproduction is oogamous.	Sexual reproduction is anisogamous.

It's complex form of pandorina. It's a genus of green algae.

Multicellular motile thallus. Unicellular motile thallus.

6. Complex form in the algae

***Fucus*:** A genus of brown algae whose species are often 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 are believed to aid the plant to float on the water. It varies in size from a few centimeters to about 2 meters in length. Sexual reproduction is oogamous, sex cells are produced in conceptacles which have openings (ostioles) on the surface of the thallus.