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1. A system of plants taxonomy, the Eichler system was the first phylogenic (phyletic) or evolutionary system. He gave system of classification for the whole plant kingdom. Eichler classified the plant kingdom into two sub -kingdom. They are CRYPTOGAMAE and PHANEROGAMAE

(A) CRYPTOGAMAE are flowerless and seedless plants. They are simple and flowerless plants like algae, mosses and ferns which do not produce flower, they are considered lower plants. They were further divided into three divisions

i. Thallophyta (the algae and fungi)

ii. Bryophyta (the liverworts and mosses)

iii. Pteridophyta (the club mosses, horsetail, ferns)

(B) PHANEROGAMAE are seed bearing plants. So, they are also known as spermatophyte. They are higher plants. the plant body is differentiated in roots, stem, leaves with well developed vascular system. Examples are angiosperm and gymnosperm.

2. Importance of algae to man:

i. direct use of algae as food for man.

ii. as a source of agar in the production of ice-cream and jellies.

iii. medicine and minerals.

iv. manufacture of iodine.

v. used as fertilizer.

vi. ornamental uses.

3. Unicellular forms of algae are also called acellular algae as they function as complete living organism. Unicellular forms are common in all groups of algae except RHYDOPHYCEAE, PHYAEOPHYCEAE AND CHAROPHYCEAE. The unicell may be motile or non-motile.

4. cell division or fusion is the simplest method of reproduction for the unicellular forms of algae it is often called binary fission as found in chlamydominas. In this method the two vegetative cells divide into two daughter cells, those finally divide as new individuals. The reproduction is asexual.

5. Difference between Volvox and Synura

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|  | **Volvox** | **Synura** |
| i. | reproduction is both sexual and asexual | reproduction is sexual |
| ii. | spherical colonies of up to 50000 cells | few cells in colonies |

6.spirogyra is a filamentous charophyte green algae of the order of zypementales, named for the helical or spinal arrangement of the chloroplast that is characteristics of the genus. It is commonly found in the fresh water habitat, and there are more than 400 species of spirogyra in the world.