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MEDICINE AND SURGERY
191MHS01130
BIO 102 ASSIGNMENT

1. A system of plant taxonomy, the Eichler system was the first phylogenetic (phyletic) or evolutionary system. He gave system of classification for the whole plant Kingdom. Eichler classified the plant Kingdom into ^{two} sub-Kingdoms. 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 flowers, fruits and seeds. Cryptogams are considered as lower plants.

B) Phanerogamae are seed bearing plants. So they are also known as spermatophytes. They are higher plants. The plant body is differentiated into roots, stem and leaves with well developed vascular system. Examples are angiosperms and gymnosperms.

2. Importance of algae to man

- i Direct use of algae are food for man
- ii As a source of agar in the production of icecream, jellies, desserts etc
- iii It is used in the manufacture of loche
- iv It is used for medicines and minerals
- v It is used as fertilizer
- vi It is used as ornaments
- vii Alginic acid, algin and mannitol which is used in the production of dyes, buttons and

combs

viii It is used in the manufacture of soaps and alcohols

3. Unicellular forms of algae are also called acellular algae as they function as complete living organisms. Unicellular forms are common in all the groups of algae except Rhodophyceae, Phaeophyceae and Charophyceae. The unicells may be motile or non-motile.

4. Cell division or fission is the simplest method of reproduction for the unicellular forms of algae. It is often called binary fission as found in *Chlamydomonas*. In this method the two vegetative cells divide mitotically into two daughter cells, these finally divide on new individuals. Their reproduction is asexual.

<u>Volvox</u>	<u>Synura</u>
a. Reproduction is both sexual and asexual.	Reproduction is sexual.
b. Spherical colonies of up to 50,000 cells.	Few cells in colonies.

6. Spirogyra is a filamentous charophyte green alga of the order of Zygnematales, named for the helical or spiral arrangement of the chloroplasts that is characteristic of the genus. It is commonly found in freshwater habitats, and there are more than 400 species of Spirogyra in the world.