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1. Eichler system was the first phylogenetic evolutionary system . He classified plant into two sub kingdoms :

- Cryptogame: These are plants with concealed reproductive organs. There are flowerless and seedless plant examples are mosses, algae, and ferns that do not produce flowers, fruits and seeds .
- Phanerogamae: They are plants with visible reproductive organs (floral) . They are seed bearing plants and are also known as spermatophyte. Their body is differentiated into roots stems and leaves with well developed vascular system. Examples are Angiosperm and Gymnosperm.

2. Importance of algae to man:

- Algae serve as source of food for man as they are rich in vitamins and minerals.
- For the manufacture of light weight buildings.
- For the manufacture of medicine and minerals.
- It can be used for fertilizers.
- For ornamental uses
- For the manufacture of soaps and alums
- It can be used as agar for the manufacture of jellies, ice cream.

3. Unicellular forms of algae are also called unicellular algae as they function as complete living organisms. Unicellular forms of algae are common in all groups of algae except Rhodophyceae, Phaeophyceae and Charophyceae. The unicellular may be motile or non motile. They are plant like autotrophs and contain chlorophyll. They often occur in fresh water. Examples include yeast, diatoms, slime, molds, Chlamydomonas.
4. Reproduction in algae occurs in binary fission in a longitudinal plane. It involves cell division followed by cell separation. Multicellular algae involve asexual or sexual unicellular stages and for some organisms fragmentation. Algae reproduce by vegetative, asexual and sexual methods. Vegetative reproduction is by fragmentation. Asexual reproduction is by production of different types of spores. Sexual reproduction takes place through fusion of gametes. Many small algae reproduce asexually by ordinary cell division or by fragmentation whereas large algae reproduce by spores. Some green algae reproduce non motile spores called aplanospores while others produce zoospores which lack true cell walls and bear one or more flagella.
5. The two types of colonial forms of algae include Volvox and Synura.

Differences:

- Volvox reproduces sexually and asexually while Synura reproduces just sexually.
6. Spirogyra is a filamentous charophyte green algae of the order Zygnematales named for the helical or spiral arrangement of the chloroplast that is characteristic of the genus. It is found in fresh water environments around

the world. They are filamentous algae that consist of thin unbranched chains of cylindrical cells. It reproduces by vegetative , sexual and asexual method.