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1. A system of plant taxonomy, the Eichler system was the first phylogenic (phyletic) or evolutionary system of classification. He gave system of classification for the whole plant kingdom. Eichler was able to classify the plant kingdom into two sub-kingdom. They are called Cryptogamae and Phanerogamae.

- Cyptogamae 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 all considered as lower plants because they are seedless in nature
- Phanerogamme 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.

- Algae can be used as a source of food for man.
- As a source of agar in the production of ice cream, jellies, desserts etc.
- Algae contains high iodine content which prevents goitre which has helped in the aspect of medicine.
- It serves as thickening agents in ice cream and shampoo in industries
- Alginic acid from the brown algae is used to stabilize emulsions and suspensions.

3. Unicellular form of algae are also called acellular algae as they function as complete living organisms. The unicells may be motile or non-motile. It's found in stagnant water. It has the flagella which enables movement .The cell is bounded by a cellulose cell wall.

4. Reproduction can either be vegetative (asexual) or sexual

Vegetative 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 cells. The amount of genetic material in the mother cell nucleus of n , the daughter cells also have the same number of n quantity of genetic material. The mitotic division maintains the quality and quantity of genetic material in both the mother cell and the daughter cell.

Sexual reproduction

It involves union of sex cell, aggregation of cells in a colony occurs under favourable conditions. These cells pair by their posterior end. This pairing is said to be isogamous because

the pairing cells(gametes) are morphologically identical .

5. The colonial forms in Algae

➤ Pandorina

➤ Volvox

Pandorina

Volvox

Sexual reproduction is anisogamous

Sexual reproduction is oogamous

Unicellular motile thallus

Multicellular motile thallus

It's a genus of green algae

It's complex form of pandorina

6. Spirogyra is a filamentous charophyte green algae of the order of Zygementales, 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.