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1. A system of plant 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.
2. 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 considered as lower plants.
3. Phanerogamme are seed bearing plants. So they are also known as spermatophytes. They are higher plants. The plants body is differentiated into roots, stems and leaves with well-developed vascular system. Examples are angiosperms and gymnosperms.
4. Importance of algae to man.
5. Algae serve as food for people and livestock.
6. It serves as thickening agent in ice cream and shampoo.
7. It is used in the production of medicine and minerals.
8. Manufacturing of iodine to prevent goiter.
9. Manufacture of soap and alums.
10. Chlamydomonas represents the unicellular and motile forms of green algae found in stagnant water usually along with other forms. Flagella are the structures for motility. The cell is bounded by a cellulose cell wall; contains organelles e.g. nucleus, mitochondria, stigma, chloroplast , pyneroid etc. The nucleus carries the genetic programme of the cell; the stigma is for photoreception. The mitochondria mediate the elaboration of energy molecule. Manufactured sugar is processed into starch on the pyneriod.
11. 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 vegetative cells divides the mitotically into two daughter cells, those finally divide a new individuals. There reproduction is asexual.
12. Difference between volvox and synura

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| VOLVOX | SYNURA |
| A. Reproduction is both sexual an asexual | B. Reproduction is sexual |
| B. Spherical colonies are up to 50,000 cells. | B. Few cells in colonies |

1. SPIROGYRA

It is one of the best known filamentous algae. It occurs in stagnant bodies of water as green floating threads. Filaments are unbranched with uninucleate cells and grow by continuous cell division and fragmentation of filaments. The entire length of each cell has a characteristics spiral ribbon like chloroplast. Pyrenoids are borne on the chloroplast and vacuoles are also visible in the cells.