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19/MHS01/093 MEDICINE & SURGERY.
BIO 102

1) Classify plants according to Eichler's grouping of 1883-

	Division	Class
A	Thallophyta	- Phycotinae [Algae] - Mycotinae [Fungi]
B	Bryophyta	- Musci [Mosses] - Hepaticae [Liverworts]
C	Pteridophyta	- Psilotinae [Psilotum] - Lycopodinae [Lycopodium & Selaginella] - Equisetinae [Horsetails] - Filicinae [Ferns]
D	Spermatophyta	- Gymnospermae [Gymnosperms] - Angiospermae [Angiosperms]

2) How are algae of Importance to man?

A. Algae serve as food for people & Livestock
B Algae have high nutrient in protein, and minerals & vitamins.
C Algae are harvested for cosmetics purposes.
D Algae are used as thickening agents in ice cream & syrups

3 Describe a unicellular form of Algae.
Chlamydomonas; A case study.
Chlamydomonas is a unicellular, motile form of green algae which is found in stagnant water
It has flagella for motility. It is surrounded by a cellulose cell wall, nucleus and other organelles
It has pyrenoid where manufactured sugar is processed into starch.

4 Reproduction In Unicellular form of Algae.
In chlamydomonas, reproduction can be vegetative or sexual. In vegetative reproduction, daughter cells are produced which has the same no & quality of genetic material as the mother cells. This occurs by the means of Mitosis. The daughter cells produced are called zoospores.
In sexual Reproduction, which occurs due to certain environmental conditions, The haploid daughter cells form gametes of opposite mating strains. These opposite strains fuse together in a process called Isogamy to form a diploid zygote. The zygote undergoes a period of dormancy, after then undergoes meiosis which produce

four genetically unique haploid cells that eventually grow into mature cells

5 Differentiate between the 2 types of colonial form of Algae

	Pandorina	Volvox
1	Complex form of Algae	More complex than Pandorina
2	A colony of 16 cells attached to one another	A colony of thousands of cells attached to each other
3	All cells form new colonies	Not all cells form new colonies, only the large cells at the posterior end
4	Sexual reproduction is anisogamous	Sexual reproduction is oogamous

6. Describe a named complex form of Alga

Fucus: A case study.

Fucus is a brown algae whose species are found on rocks in the intertidal zone of sea shores

A flattened, dichotomously-branched thallus

It has a mid rib, a vegetative apex, multicellular disk with which is attached to rock surfaces

The plant body has blades which ends floating in water

It varies in species, size and length. It reproduces sexually by Oogamous pairing.