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MATRIC NUMBER: 19/MHS01/217

COLLEGE/DEPARTMENT: MHS/MBBS

COURSE: BIO 102

ASSIGNMENT

1.EICHLER'S GROUPING OF 1883

DIVISION	CLASS
Thallophyta	i. Phycotinae(Algae) ii. Mycotinae(Fungi)
Bryophyta	i. Hepaticae(Liverworts) ii. Musci(Mosses)
Pteridophyta	i. Psilotinate(Psilotum) ii. Lycopodinae (Lycopodium, Selaginella) iii. Equisitinae(Horsetails) iv. Filicinae(Ferns)
Spermatophyta	i. Gymnospermae (Gymnosperms) ii. Angiospermae (Angiosperms)

2.

IMPORTANCE OF ALGAE TO MAN

- i. It serves as a source of food to man
- ii. they are used as thickening agents in ice-cream and shampoo
- iii they have high protein content and high concentrations of minerals, trace elements and vitamins.
- iv. They have high iodine content hence they prevent goiter.

3. Unicellular form of Algae e.g. Chlamydomonas

It possesses flagella for mobility. The cell is bounded by a cellulose cell wall and contains organelles such as; nucleus which carries the genetic programme of the cell, the stigma for photoreception, the mitochondria which mediates the elaboration of energy molecules and the pyrenoid where manufactured sugar is processed into starch.

4. Reproduction can either be vegetative or sexual

VEGETATIVE REPRODUCTION

This 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 is n , the daughter cells also have n quantity of genetic material.

SEXUAL REPRODUCTION

It involves the union of the sex cell, aggregation of cells in a colony occurs under favorable conditions. These cells pair by their posterior end. This pairing is said to be **isogamous** because the pairing cells (gametes) are morphologically identical.

5. Differences between Pandorina and Volvox

Pandorina	Volvox
It is a unicellular motile thallus	It is a multicellular motile thallus
Colony consists of 16 cells attached to one another	Colony has thousands of cells connected with cytoplasmic strands that run through the cells
Sexual reproduction is anisogamous	Sexual reproduction is oogamous

6. Complex form of Algae e.g. Fucus

It is a genus of the brown Algae whose species are found on rocks in the intertidal zones of sea shores. The body of the plant is flattened, dichotomously-branched thallus with a mid-rib, a vegetative apex and a multicellular disk with which the plant attaches to a rock surface. The body has air bladders which is believed to aid the plant to float on the water. It varies in size, from a few centimetres to about 2 metres in length.