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DEPARTMENT: NURSING

MATRIC NUMBER: 19/MHS02/057

ASSIGNMENT

1. Eichler’s grouping of plants of 1883

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| DIVISION | CLASS |
| Thallophyta | Algae  Fungi |
| Bryophyta | Liverworts  Mosses |
| Pteridophyta | Club mosses  Horse tails  Ferns |
| Spermatophyta | Seed plants  (Angiosperms and gymnosperms) |

1. Importance of algae to man
2. Algae is used as health supplement for humans(e.g. vitamins, anti-oxidants, potassium e.t.c. can be gotten from algae)
3. Algae can be used as soil addictive, algae possess the ability to extract nitrogen from the air and deposit the nitrogen into the surrounding soil or water, this process is called nitrogen fixation.
4. Algae produces a large amount of oil that can be converted into biofuels.
5. Unicellular form of algae

* Unicellular forms of algae are also called acellular algae.
* Algae as the holophytic organisms fail to reach the higher level differentiation characteristic of the archegoniate plants.
* Algae plants are simple plants with an autotrophic mode of nutrition.
* Algae are chlorophyll-bearing organisms which are thalloid,i.e. having no true roots, stems and leaves or leaf-like organs.
* They are aquatic.

1. How unicellular algae carries out reproduction

Algae carry out reproduction both sexually and asexually (vegetative)

**Vegetative reproduction**

Vegetative reproduction results in the production of daughter cells in which the amount and 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 n quantity of genetic material. The mitotic division maintains the quality and quantity of genetic material.

**Sexual reproduction**

It involves union of 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.

1. Colonial forms of algae are;

* Pandorina
* Volvox

**DIFFERENCES**

|  |  |
| --- | --- |
| Pandorina | Volvox |
| Sexual reproduction in angiosperms | Sexual reproduction in oogamus |
| Unicellular motile thallus | Multicellular motile thallus |
| It’s a genus of green algae | It’s complex form of pandorina |

1. A complex form of algae is seaweed

* Seaweed is a group of organism called macro-algae.
* Seaweed is a macroscopic, multicellular, marine algae.
* Seaweed is autotrophic.
* They don’t have roots, stems, leaves and flowers.
* Seaweed can be divided into three color groups which are; red seaweed, green seaweed and brown seaweed.