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ASSIGNMENT

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 which is as follows:

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| Division | Class |
| Thallopyta | Phycotinae (Algae)  Mycotinae (Fungi) |
| Bryophyta | Hepaticae  (Liverworts)  Musci (Mosses) |
| Pteridophyta | Psilotinate (Psilotum)  Lycopodinae  (Lycopodium,  Selaginella)  Equisetinae  (Horsetails)  Filicinae (Ferns) |
| Spermatophyta | Gymnospermae  (Gymnosperms)  Angiospermae  (Angiosperms) |

1. The importance of algae to man includes:

* Algae serves as food to fish
* Certain species are harvested for food and cosmetics in the far East
* Algae have high iodine content therefore prevent goitre
* Brown algae yield Alginic acid which is used to stabilise emulsion and suspensions
* Different species of red algae provide agar and Carrageenan used for the preparation of various gels used in scientific research
* Algae have been used in the Asian countries to cure or prevent illness e.g. cough, gout, gallstones, hypertension etc.

1. Unicellular form of Algae

Chlamydomonas represents the unicellular and module forms of

green algae.

It’s found in stagnant water.

It has the flagella which enables movement

The cell is bounded by a cellulose cell wall

The stigma is for photoreception

4. REPRODUCTION

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 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 favourable conditions. These cells pair by their posterior end.

This pairing is said to be isogamous because the pairing

cells(gametes) are morphologically identical .

1. The colonial forms of algae include:

* Pandorina
* Volvox

|  |  |
| --- | --- |
| Pandorina | Volvox |
| Sexual reproduction  is anisogamous | Sexual reproduction  is oogamus |
| Unicellular motile hallus | Multicellular motile hallus |
| It’s a genus of green algae | It’s complex form of  pandorina |

1. Complex form of alga:

Fucus

It’s a genus of the brown Algae whose species are found on rocks in

the intertidal zones of the 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 plant is attached to 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.

Sexual reproduction is oogamous, sex cells are produced in

conceptacles which have openings (ostioles) on the surface of the thallus.