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DEPARTMENT: NURSING (100 LEVEL)

COLLEGE: MEDICINE AND HEALTH SCIENCES

COURSE: BIO102

MATRIC NO: 19/MHS02/110

ASSIGNMENT

1. Eichler’s grouping of 1883

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

2. Importance of algae to man:

I. Food for sea animals and fishes.

II. As a source of vitamins.

III. As a source of agar.

IV. Manufacture of iodine.

V. Used as fertilizers.

3. Unicellular form of algae:

I. Chlamydomonas represents the unicellular and motile forms of green algae.

II. Found in stagnant water usually along with other forms

III. Flagella are the structures for mobility.

IV. The stigma is for photoreception.

V. The mitochondria mediate the elaboration of energy molecules.

4. REPRODUCTION

Reproduction can either be vegetative (asexual) or sexual

VEGETATIVE REPRODUCTION results in production of daughter cells in which the amounts and quality of genetic material in the nucleus of the mother cell is maintained in the daughter cells. Thus, if the amount of genetic material in the mother cell nucleus is n, the daughter cells also have n quantity of genetic material.

SEXUAL REPRODUCTION involves union of sex cells (gametes). In chlamydomonas, aggregation of cells (clumping) in a colony occurs under favorable conditions. These cells pair by their posterior ends. This pairing is said to be isogamous because the pairing cells are morphologically identical. The cytoplasm of the pairing cells fuse (plasmogamy) and the flagella are lost.

5. Types of colonial form of algae

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| PANDORINA | VOLVOX |
| Sexual reproduction is anisogamous | Sexual reproduction is oogamus |
| Unicellular motile thallus | Multicellular motile thallus |
| It is a genus of green algae | It is complex form of pandorina |

6. Complex form of algae

Fucus: A genus of brown algae whose species are often found on rocks in the intertidal zones of the sea shores. The plant body is flattened, dichotomously-branched thallus with a mid-rib, a vegetative apex, a reproductive apex at maturity and a multicellular disk (hold fast) with which plant is attached to rock surface. The plant body also has air bladders which are believed to aid the plant to float on the water. Various species of fucus exist; vary in size from a few centimeters to about 2metres in length. They also vary in terms of whether the sex cells are found in the same sexual chamber or in different sexual chambers on different plant bodies. Sexual reproduction is oogamus, sex cells are produced in conceptacles which have openings (ostioles) on the surface of the thallus.