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MATRIC NO: 19/MHS11/075

COURSE CODE: BIO 102

 ASSIGNMENT

1. Eichler's grouping of 1883 classified plants into two sub-kingdoms. They are; Cryptogamae and Phanerogamae.

The cryptogamae include;

Algae

Bryophytes

Pteidophyta

The phanerogamae include;

Gymnosperms

Angiosperm

2. Importance of algae to man;

i: Algae has high iodine content, therefore it prevents goitre.

ii: It serves as food for people and livestock, thickening agents in ice cream, shampoo and drugs to ward off diseases.

iii: Algae has been used for centuries, especially Asian countries for their supported powers to cure or prevent illnesses.

iv: Diatoms (a type of algae) have been used in forensic medicine as their presence in the lungs can indicate a person died due to drowning.

v. It is a source of food for fish.

vi. Used as fertilizer.

3. Chlamydomonas represents the unicellular forms of green algae. It is found in stagnant water. The cell is bounded by a cellulose cell wall; contains organelles. Flagella are structures for mobility (i.e movement). Manufactured sugar is processed into starch on the pyrenoid.

4. Reproduction in Chlamydomonas can either be vegetative (asexual) or sexual.

5.

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| Pandorina | Volvox |
| i. Sexual reproduction is achieved by anisogamous pairing (pairing by the flagella ends).ii. The colony consists of 16 cells attached to one another.iii. It is less evolutionary advanced. | i. Sexual reproduction is oogamous i.e the male gamete is motile while the female gamete (egg) is not motile.ii. There are more cells in the colony of the volvox, number may run into thousands and connected with cytoplasmic strands that run through the cells.iii. It is concluded to be evolutionary more advanced. |

6. Brown 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 has air bladders which is believed to aid the plant to float on the water. Sexual reproduction is oogamous. Various species of fucus exist, vary in size from a few centimeters to about 2 meters in length. Sex cells are produced in conceptacles which have openings (ostioles) on the surface of the thallus.