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DEPARTMENT: MEDICINE AMD SURGERY

MATRIC NUMBER: 19/MHS01/059

BIO 102 ASSIGNMENT

1. **Classify plants according to Eichler’s grouping of 1883**
2. Thallophyta
3. Bryophyta
4. Pteridophyta
5. Spermatophyta
6. **How are Algae of importance to man**
7. They are used as thickening agents in the shampoo and ice cream industries.
8. Sources of food for livestock and man
9. Ornamental purposes
10. It contains high iodine content used in the prevention of goiter
11. It serves as fertilizers
12. **Describe a unicellular form of algae**

CHLYMADOMONAS

It is a motile form of algae (can move).

It is found in stagnant water.

It has an eyespot (stigma) for photoreception

It has a cup shaped chloroplast, pyrenoid which is used for manufacturing stored sugar to starch

1. **How does this unicellular form of alga in question 3 carry out its reproduction**

Reproduction in chylmadomonas can be sexual and asexual

Asexual reproduction which is vegetative results in the production of daughter cells in which the amount and quality of the genetic material remains the same. It is mitotic

Sexual reproduction: in some certain environmental conditions instead of dividing vegetatively, they mate. They form gametes (mating strains) and pair at the posterior end

1. **Differentiate between the two types of colonial form of** **algae**

The colonial forms are:

(i)Pandorina

(ii)Volovox

|  |  |
| --- | --- |
| PANDORINA | VOLVOX |
| Amisogamous sexual reproduction | Oogamus sexual reproduction |
| Few colonies(up to 16) | Large colonies(in thousands) |

1. **Describe a named complex form of algae**

FUCUS

It is a genus of brown algae that is found on rocks in the intertidal zones in sea shores.it is flattened, dichotomously branched thallus. The body has air bladders which aids the plant to float on water. It varies in size.