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MATRIC NO. 19/MHS01/052 DEP MBBS COLLEGE MHS

1 Classify plats according to Elchler’s grouping 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 How are algae of importance to man?

1. It serves as food for people
2. It is used as thickening agents in ice cream and shampoo
3. They have high iodine content therefore prevent goiter.

3 Describe a unicellular form of algae.

Chlamydomonas represents the unicellular and motile forms of green algae. They are found in stagnant water usually with other forms. Their flagella are structures for mobility. The cell is bounded by a cellulose cell wall; contains organelles e.g. nucleus, mitochondria etc. the nucleus carries the genetic programme of the cell. The stigma is for photoreception. The mitochondria mediate the elaboration of energy molecules.

4 How does this unicellular alga described in question 3 carry out its reproduction

In Chlamydomonas, reproduction can either be vegetative (asexual) or sexual

Vegetative reproduction results in production of daughter cells in which he amount and quality of genetic material in the nucleus of the mother cell is maintained in the daughter cells.

Sexual reproduction: certain environmental conditions e.g. lack of nutrients or moisture may trigger the haploid daughter cells to undergo sexual reproduction. Instead of forming into spores, the haploid daughter cells form gametes that have two different mating strains which are structurally similar and are positive and negative strains.

5 Differentiate between the two types of colonial form of algae

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| PANDORINA | VOLVOX |
| They usually occur in water bloom | They show more complex form than pandorina |
| The colony consists of 16 cells attached to one another | They are more cells in the colony |
| Each cell has many attributes/features in common with Chlamydomonas e.g. nucleus, chloroplast, flagella and stigma |  |
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6 Describe a named complex form of alga.

The focus

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.