

NAME: EMMA-IRUAYENAMA AMINAYANASAM VICTORIA

MATRIC NUMBER: 19/MHS01/155

DEPARTMENT: MEDICINE AND SURGERY

COURSE CODE: BIO 102

- 1) Classify plants according to Eichler's grouping of 1883: Eichler classified plants based on their division and class. Starting from the smallest division thallophyta having two classes, to the highest division spermatophyta which are seed bearing plants comprising of 2 divisions.
- 2) How are algae of importance to man:
 - i) As low diet food for obese people
 - ii) As thickening agents in cream and shampoo.
 - iii) To prevent goitre.
 - iv) Drugs to ward off diseases.
 - v) As fertilizers
 - vi) Ornamental use
- 3) Describe a unicellular form of algae: *Chlamydomonas* as a unicellular form of algae is found in stagnant water as its habitat. It undergoes sexual and asexual reproduction. It has flagella which it uses as locomotion and is the simplest form of algae.
- 4) How these unicellular algae mentioned above carry out reproduction: *Chlamydomonas* undergoes both sexual and asexual reproduction. The asexual producing daughter cells of same quantity and quality as in the parent cells and results in the increase in number of cells in unicellular organisms and increase in size of multicellular organisms. In sexual reproduction however, gametes are formed in certain environmental conditions having two different mating strains (positive and negative strains) and are structurally similar.
- 5) Differentiate between 2 types of colonial form of algae

| Pandorina | Volvox |
|---|---|
| 1) Colony consists of 16 cells attached to one another. | Consists of many cells, running into thousands and connected with cytoplasmic strands that run through the cells. |
| 2) Undergo sexual and asexual | Undergoes sexual |

| | |
|---|--|
| reproduction like chlamydomonas 3) Sexual reproduction is by anisogamous pairing. | reproduction. Sexual reproduction is oogamous (i.e male is motile, female gamete is non motile). |
|---|--|

6) Describe a named complex form of algae

A brown algae *Fucus* which is often found on rocks in intertidal zones of the sea shores is a complex form of algae. The plant's body is flattened, has a dichotomously branched thallus with a mid-rib. They undergo sexual reproduction which is oogamous.