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DEPARTMENT: MBBS

MATRIC NUMBER: 19/MHS01/167

COURSE CODE: BIO 102

### ASSIGNMENT

1. Eichler's Grouping of 1883

<u>DIVISION</u>	<u>CLASS</u>
<u>THALLOPHYTA</u>	<u>PHYCOTINAE (Algae)</u> <u>MYCOTINAE (Fungi)</u>
<u>BRYOPHYTA</u>	<u>HEPATICAE(Liverworts)</u> <u>MUSCI(Mosses)</u>
<u>PTERIDOPHYTA</u>	<u>PSILOTINATE(Psilotum)</u> <u>LYCOPODINAE(Lycopodium)</u> <u>EQUISETINAE(Horsetails)</u> <u>FILICINAE(Ferns)</u>
<u>SPERMATOPHYTA</u>	<u>GYMNOSPERMAE(Gymnosperms)</u> <u>ANGIOSPERMAE(Angiosperms)</u>

2. IMPORTANCE OF ALGAE TO MAN

- a. It serves as thickening agents in ice cream and shampoo
- b. It serves as food for people
- c. The red algae provide agar and carrageen used for the preparation of various gels used for scientific research
- d. Alginic acid from the brown algae is used to stabilize emulsions and suspensions
- e. It contains high iodine content which prevents goitre

3. UNICELLULAR FORM OF ALGAE

- a Chlamydomonas represents the unicellular and module forms of green algae.
- b It is found in stagnant water.
- c It has the flagella which enables movement.
- d The stigma is for photoreception.
- e The cell is bounded by a cellulose cell wall.

4. REPRODUCTION

Reproduction is the process whereby parent organisms give birth to young ones of their kind. Reproduction can either be vegetative(asexual) or sexual.

Vegetative Reproduction results in the production of daughter cells in which the amount and quality of genetic material in the nucleus of the mother cell is maintained in the daughter cells. The amount of genetic material in the mother cell nucleus of  $n$ , the daughter cells also have  $n$  quantity of genetic material. The mitotic division maintains the quality and quantity of genetic material.

Sexual Reproduction involves the union of sex cell, aggregation of cells in a colony occurs under favorable conditions. These cells pair by their posterior end. This pairing is said to be isogamous because the pairing cells are morphologically identical.

5. The colonial forms of algae

- a Pandorina
- b Volvox

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

## 6. COMPLEX FORM IN THE ALGAE

### FUCUS

It is a genus of the brown algae whose species are found on the rocks in the intertidal zones of the sea shores. The body of the plant is flattened dichotomously-branched thallus with a mid rib, a vegetative apex and a multicellular disk with which plant is attached to a rock surface . The body is believed to aid the plant to float on the water. It varies in size from a few centimeters to about two meters in length.

Sexual reproduction is oogamous, sex cells are produced in conceptacles which have openings(ostioles) on the surface of the thallus.