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**DEPARTMENT: Nursing**

**MATRIC NO.: 19/mhs02/101**

**COURSE: BIO 102**

1. **Eichler’s grouping of 1883**

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| **DIVISION** | **CLASS** |
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| **Thallophyta** | **Phycotinae (Algae)**  **Mycotinae (Fungi)** |
| **Bryophyta** | **Hepaticae (Liverworts)**  **Musci (Mosses)** |
| **Pteridophyta** | **Psilotinate (psilotum)**  **Lycopodinae (Lycopodium, Selaginella)**  **Equisetinae (Horsetails)**  **Filicinae (ferns)** |
| **Spermatophyta** | **Gymnospermae (Gymnosperm)**  **Angiospermae (Angiosperm)** |

1. **Importance of Algae to man.**

* **It servers as thickening agent in ice cream and shampoo.**
* **Alginic acid from the brown algae is used to stabilize emulsions and suspensions.**
* **The red algae provides agar and carrageen used for the preparation of various gels used for scientific research.**
* **It serves as food for people.**
* **It contains high iodine content which prevents goiter.**

1. **Unicellular form of algae.**

**The unicellular form of algae is the chlamydomonas.it is also the module form of green algae. It is a small, solitary, free swimming, photosynthetic protest. It is common in fresh water habitant such as ponds, watering troughs and bird baths. It has the flagella which enables movement. The cell is bounded by a cellulose cell wall and the stigma is photoreception.**

1. **The reproduce both sexually and asexually.**

* **Sexual reproduction:**

**It involves union of sex cells, aggregation of cells in a colony occurs under favourable conditions. Whenever, two isogametes of different mating types are collided by chance, they are contacted with each other towards their posterior end. Both gametes unite and form a diploid. The zygote soon losses its flagella, develops thick wall around it and becomes relatively more resistant to unfavourable growth conditions. With the return of favourable ecological conditions, zygote undergoes meiosis zoospores each of which grows into a vegetative cell.**

* **Asexual reproduction:**

**It 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 quantity and quality of genetic material.**

1. **The colonial forms in algae**

* **Pandorina**
* **Volvox**

|  |  |
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| **PANDORINA** | **VOLVOX** |
| **Sexual reproduction is anisogamous** | **Sexual reproduction is oogamus** |
| **Unicellular motile thallus** | **Multicellular motile thallus** |
| **It’s genus of green algae** | **It’s complex form of pandorina** |

1. **Complex form in the algae**

**It’s genus of the brown algae whose species are found on rocks in the intertidal zones of the sea shores. The body of the plant is flattened, dichotomously-branched thallus with a multicellular disk with which plant is attached to rock surface. The body has air bladders which is believed to aid the plant to float on the water. It varies in size from a few centimetres to about 2 centimetres in length. Sexual reproduction is oogamus, sex cells are produced in conceptacles which have openings (ostioles) on the surface of the thallus.**