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Matric num: 19/mhs01/101

Dept: Medicine and Surgery

Bio 102 assignment

1. Classify plants according to Eichler’s grouping of 1883

Ans:

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| DIVISION | CLASS |
| THALLOPHYTA | Phycotinae(Algae)Mycotinae(fungi) |
| BRYOPHYTA | Hepaticae(Liverworts)Musci(Mosses) |
| PTERIDOPHYTA | Psilotinate (Psilotum)Lycopodinae(lycopodium,selaginella,eguisetinae,horsetails)Filicinae(ferns) |
| Spermatophyta | Gymnospermae(Gymnosperms)Angiospermae(Angiosperms) |

1. How are algae of importance to man

.It serves as food for man and livestock

.It is used in cosmetics industry

.It can be used as thickening agents in ice cream and shampoo

.It can be used to make drugs to ward of diseases

1. Describe a unicellular form of algae

Chlamydomonas represent the unicellular and motile form of algae. They are found in stagnant water, they use flagella for mobility, the cell is bound by a cellulose cell wall; contains organelles e.g. nucleus, mitochondria, stigma(eyespot)etc.

1. How does the unicellular algae described in question 3 carry out its reproduction.

Reproduction in chlamydomonas can either be carried out asexually or sexually. It is carried out asexually by mitotic divisions and sexually by union of sex cells in favorable conditions.

1. Differentiate between the two forms of colonial forms of algae.

Difference between volvox and pandorina

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| Pandorina | Volvox |
| Colony consist of 16 cells attached together | Cells in this colony may run imto thousands |
| All the 16 cells divide to form new colonies | Only the larger cells at the posterior end form new colonies |
| Sexual reproduction is by anisogamous pairing | Sexual reproduction is oogamous |

1. Describe a named complex form of algae

 FUCUS a genus of brown algae are often found on rocks in the intertidal zone of the seashores. The plant body is flattened, dichotomously-branched thallus with a mid rib, and a multicellular disk with which the plant is attached to rock surfaces. They also have air bladders that enable them float on water. Sexual reproduction is oogamous.