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Level: 100l

Matric No: 19/Mhs01/319

College: Medicine and Health Science

Department: Medicine and Surgery

Course code: Bio 102

Assignment

1.

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| --- | --- |
| **DIVISION** | **CLASS** |
| Thallophyta | Phycotine  Mycotine |
| Bryophyta | Hepaticae  Musci |
| Pteridophyta | Psilotinate  Equisetinae  Lycopodinae  Filicinae |
| Spermatophyta | Angiosperm  gymnosperm |

2. **IMPORTANCE OF ALGAE TO MAN**

a. Algae serves as source of food for fish which in turn serves as food to man

b. Algae are used as source of thickening agent for ice cream and shampoo

c. Certain species of Algae are used for food because of their rich level of protein content

d. Certain species of Algae used for cosmetics

e. Some species of red algae produce aqar and carraqen which is used to prepare some qels that aid scientific research by serving as a host for growth of certain bacteria, fungi and cell culture.

3. **CHLAMYDOMONAS**

Chlamydomonas is a microscopic unicellular motile form of green algae. It possesses two flagellum which it uses for it’s locomotion. It also possesses several organelles like nucleus, the mitochondria, the pyrenoid, cup shaped chloroplast and stigma e.t.c

The nucleus carries the genetic material of the cell, the stigma is used for Photoreception, the pyrenoid processes manufactured sugar into starch while the mitochondria mediate the elaboration of energy molecules

4. **REPRODUCTION IN CHLAMADOMONAS**

Chlamadomonas carry out two types of reproduction

1. **Vegetative reproduction:**

In this type of reproduction one parent chlamadomonas loses its flagellum and undergoes mitosis in order to produce two daughter chlamadomonas from one parent with the same amount and quality of genetic makeup i.e daughter cells being genetically the same as parent cell.

1. **Sexual reproduction: This type of reproduction occurs during unfavorable conditions where by the two haploid daughter cells undergo sexual reproduction and form gametes which have two different mating strains which are structurally similar. They are either positive or negative. This strains fuse together through isogamy to form diploid zygote which has two set of chlamadomonas . This zygote then undergoes meiosis. Two produces four genetically unique haploid cells that later matures.**

5**. DIFFERENCE BETWEEN PANDORINA AND VOLVOX**

|  |  |
| --- | --- |
| PANDORINA | VOLVOX |
| Has lower number of cells per colony | Has higher number of cells per colony |
| Sexual reproduction is anisogamous | Sexual reproduction is oogamous |
| All cells partake in the formation of new cells | Only the gonidia forms new colonies |

6.