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19/MHS02/045

NURSING

MEDICINE AND HEALTH SCIENCE

BIO1O2

1. Classify plant according to eichler’s in 1883

Answers

Plants according to elichler’s grouping can be classified;

A Thallophyta class phycotinae (algae)

Class mycotinae (fungi)

B Bryophyte hepaticae(liverworts)

Musci(mosses)

C Pteridophyta psilotinate(psilotum)

Lycopodinea(lycopodium)

Equisetinae (horsetails)

Filliciane(ferns)

D spermatophyte Gymnospermae( gymnosperm)

Angiospermae( angiosperm)

2 how can alga be useful to man

Answer

A it serve as a source of food to fishes and livestock

B it is as a thicken agent in shampoo and ice cream industries

C it is use in the pharmaceutical industry for the production of drug

D algae has high iodine content and so can be used to prevent goiter

E brown algae produces an acid called alginic acid that is used in paint, ice cream, and shampoo industries to stabilize suspension and emulsion

3 describe a unicellular form of algae

Answer

The chlamydomas is a unicellular algae and it is found in stagnant water. they do not possess tissues or organ but they posses organelles which include flagella which aid locomotion, eyespot which is use for photoreception, mitochondria which mediate the elaboration of energy molecules, nucleus which carriers genetic materials, chloroplast which is cup shaped and pyrenoids which is a place where starch is converted to glycogen and sugar to glucose.

4 how does this unicellular alga described in question 3 carry out its reproduction

Answer

The chlamydomas carries its reproduction in two ways which are by vegetively{asexual} and sexual reproduction. The chlamydomas reproduce vegetatively through mitotic division which arises in the production of two daughters cell that are exactly the same as the parent cell. When chlamydomas reproduce vegetatively it looses its flagellum . the nucleus divide and the cytoplasm divide and two daughter cells are formed which are called zoospores.

The chlamydomas reproduce sexually when the nutrient of the organism is insufficient. During this period its start to produces sex cells or gametes of two different strains which are positive and negative. The process whereby the negative and positive fuse together is called isogamy. The result of this is a diploid zygote having two set of chromosomes. After a period of dormancy , the zygote undergoes meiosis a type of cell division which result in the production of 4 uniquely haploid cell that grows into mature cells.

5 Differentiate between the two types of colonial form of algae

Answer

The two colonial form of algae include paradorina and volvox.

The paradorina has 16 cells in there colony and are attached to one another. Sexual reproduction is achieved by anisogamous pairing.it also have a unicellular motile thallus.

WHILE

The volvox have thousands of cells in their colony. They are attached to each other by cytoplasmic strands. Sexual reproduction is achieved by oogamous pairing. It also have multicellular motile thallus.

6) Describe a named complex form of alga

Answer

An example of a complex form in algae is fucus. It has a flat body and it is an example of a brown algae. it is found in rocks in a intertidal zones of the sea shores. They are rock weeds with a mild rib and a reproductive apex. It has a multi disk that help it attached itself to the surface of the rock. Some have their sex cell with different chamber. It varies in size from two 2meter In length.