19/MHS01/256 (1)

19/M

BIO 102 ASSIGNMENT

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Matriculation Number: 19/MHS01/256

(2)

1.) a.

a) Fungi are responsible for the mediation of decay of organic matter. Without fungi and other microbes, the surface of the earth would have been clogged up with dead matters.

b) Fungus like yeast are important in food industries.

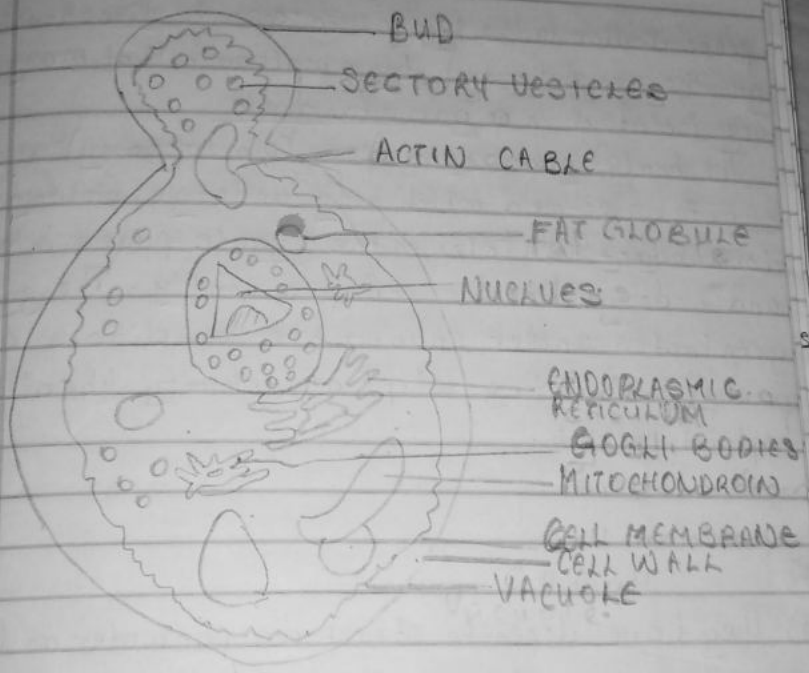
c) Fungus like mushrooms are eaten by many human societies

d) Species for example penicillum notatum produces important antibiotics

e) Some fungi are parasites to some certain horrible obnoxious pests like houseflies, grasshoppers etc

(3)

19/MHS 01/256 ②



CELL STRUCTURE OF THE BREWER'S YEAST

③ Sexual reproduction occurs when two (2) mating types of hyphae grow in the same medium. Chemical interaction in the two mating types of hyphae induces growths

19/MHS01/236 (3)

perpendicular to the hyphae in opposite directions. These growths are delimited by a wall such that many nuclei are isolated in a gametangium

The two(2) gamtangia fuse (plasmogamy) and a zygote is formed which may undergo prolonged dormancy. The nuclei in the zygote fuses into two(2) and undergo meosis independently. The zygote germinates under favourable conditions and then produces a fruiting which at maturity liberates the haploid spores.

(4)

a) They have definite structures for water and nutrient absorption from the soil, the plant body is hence divided into 2 - an aerial portion and a subterranean portion.

b) The subterranean potion is the rhizoid and it is not a true root as in the case of advanced land plants. The aerial portion being exposed to the atmosphere demands some modification and

19/MHS 0

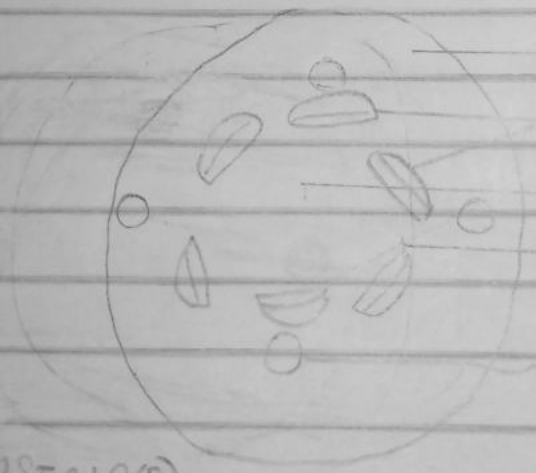
presents
surface

c) Also on
modificati
water, op

prevents excessive loss of water through the body surface.

5.) Gus

a) Eustele (s): A botany term; A type of siphonostele, in which the vascular tissue in the system forms a circular ring of bundles around a pith. It is a stele type characteristic of most seed bearing plants and a few ferns and fern allies. Its vascular bundles characteristically are arranged in a circle around a region of pith. The xylem is on the inside while the phloem is on the outside of each bundle, example is conifers



AGRAM OF EUSTELE(S)

b) Ata cto
monocots
stem
found

c) Sip
tissu
pith
seed

19/MHS01/236 (5)

b) Atactostele: It is a type of eustele, found in monocots, in which the vascular tissues in the stem exists as scattered bundles, they can be found in maize.

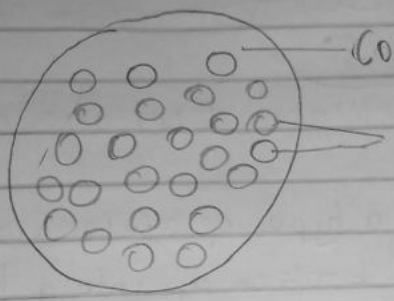
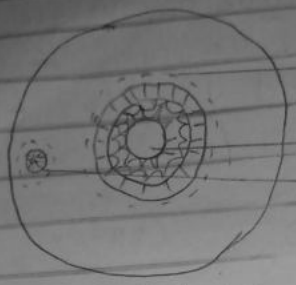


DIAGRAM OF AN ATACTOSTELE

c) Siphonostele: It is a stele in which the vascular tissue is in the form of a cylinder surrounding the pith, as in the stems of most ferns and other seedless vascular plants. An example is O

19/MHS01/2086 (6)



c) A DIAGRAM OF AN ECTOPHLOIC SIPHONOSTELE

d) Dictyostele: This is a type of stele in which the vascular cylinder is broken up into a longitudinal series or network of vascular strands around a central pith (as in many ferns)

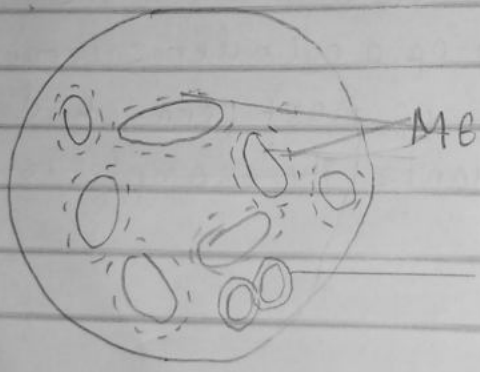


DIAGRAM OF A DICTYOSTELE

19/MHS01/236 (7)

6)

Pteridophytes are primitive vascular plants, commonly known as ferns. Their life cycle are given below:

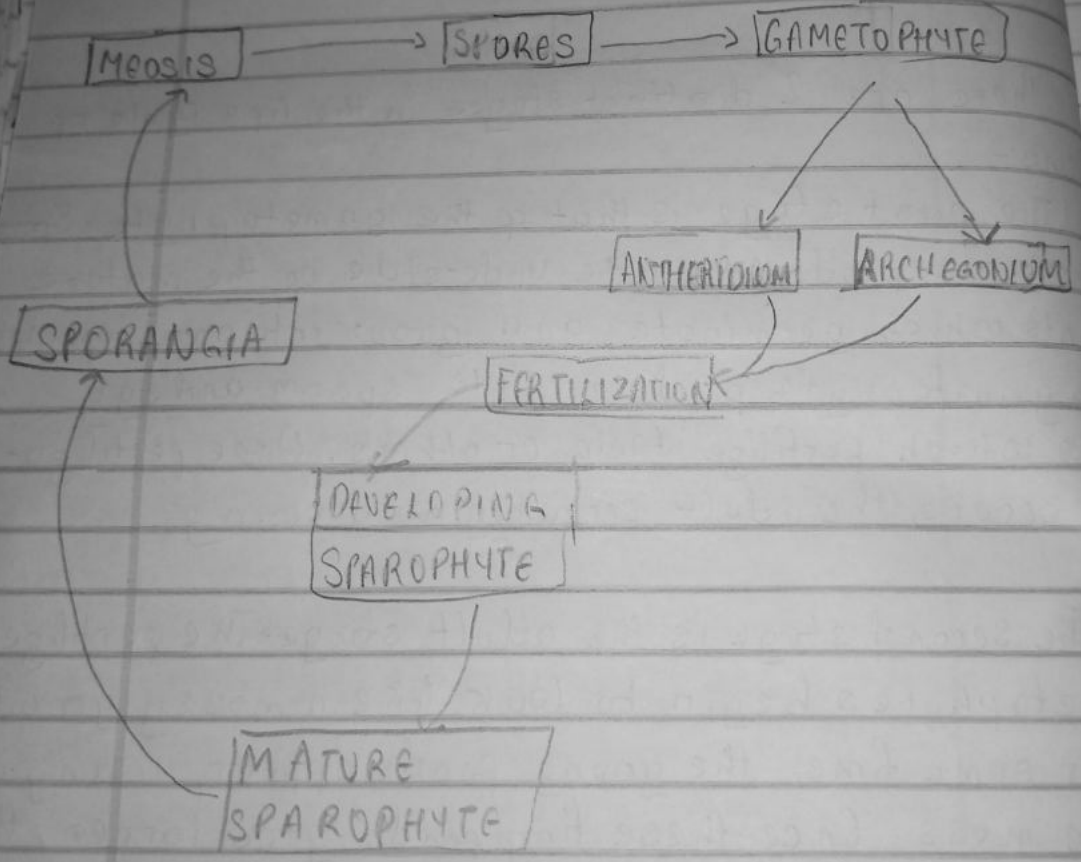
There are 2 distinct stages in the life cycle of ferns -

a) The first stage is that of the gametophyte. ~~Spore~~ Spores are produced on the underside of the mature plants which germinate and grow into gametophytes. The gamtophyte produces both sperm and egg cells which fertilize itself or others. Once fertilization occurs, the adult fern begins growing

b) The second stage is the adult stage. The fertilize gametophytes begin to look like a mossy growth. After some time, the young fonds appear, rising out of the moss. Once these tiny fonds grow larger, the plant has a better chance of survival. After the plant is large and mature, it will grow spores on the undersides of its leaves and the life cycle of ferns

19/MHS 01/236 (8)

will begin again.



LIFE CYCLE OF A FERN.