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MATRIC NO: 19/MHS01/384

DEPARTMENT: MBB3

COLLEGE: MHS

1. How are fungi importance to mankind?

Fungi are very important to mankind in many and various ways;

i. Important in an ecological way, helping ecosystems, they break down dead leaves and wood; allowing nutrients to be released into the soil

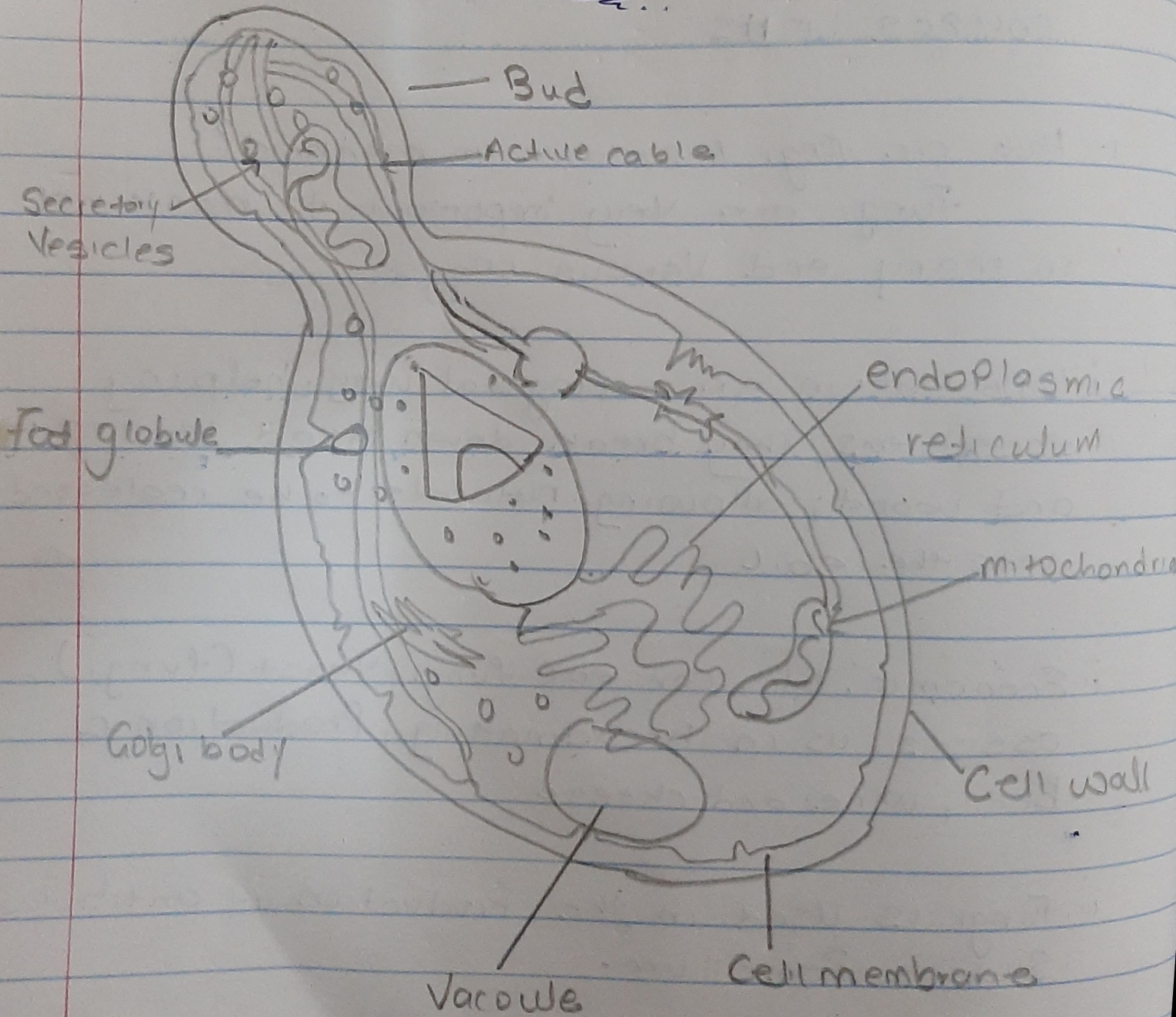
ii. Economic: We can eat fungi, yeast (fungi) assists us in breadmaking, production of beer, wine and cheese

iii. Fungi is used in the production of antibiotics such as Penicillium.

iv. Fungi are also used to produce industrial chemical, including citric, malic and lactic acids. They are also used in production of cellulase, lipase and amylase

2. Illustrate the cell structure of a Unicellular fungus with a well labelled diagram.

Answer



A WELL LABELLED DIAGRAM OF YEAST

3. Outline the sexual reproduction in a typical filamentous form of fungi.

- Occurs when two mating types of hyphae grow in the same medium they induce some chemical reactions
- These growths are delimited by a wall such that many nuclei are isolated in what is called a GAMETANGIUM.
- The two gametangium fuse (Plasmogamy) and a zygote is formed which may undergo prolonged dormancy or resting stage.
- The nuclei in the zygote fuse in twos and undergoes meiosis independently.
- The zygote germinates under favourable condition to produce a fruiting which at maturity liberates the haploid spores.

4. How do Bryophytes adapt to their environment?

Bryophytes adapt to their environment in the following way;

- (a) They have definite structure for water, they have waxy cuticle which help to protect the zygote and embryo from drying out and nutrient absorption from the soil. therefore, the plant body is divided into two (aerial portion and a subterranean portion)

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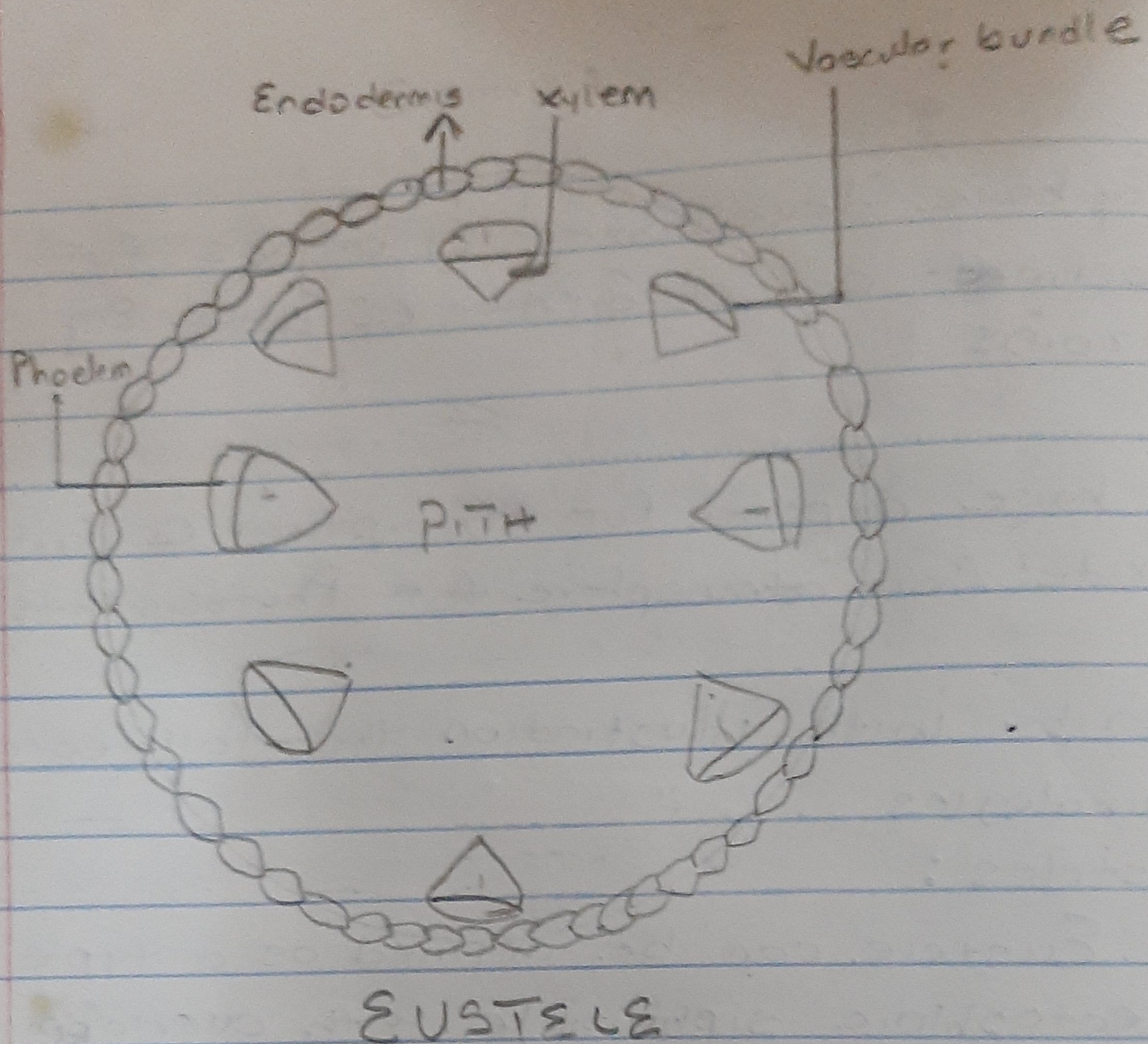
b) They have development of organs for attachment and absorption of water Fig  
RHIZOIDS

c) They have airpores for absorption of Carbon dioxide from atmosphere for Photosynthesis

5 Describe with illustration the following terminologies

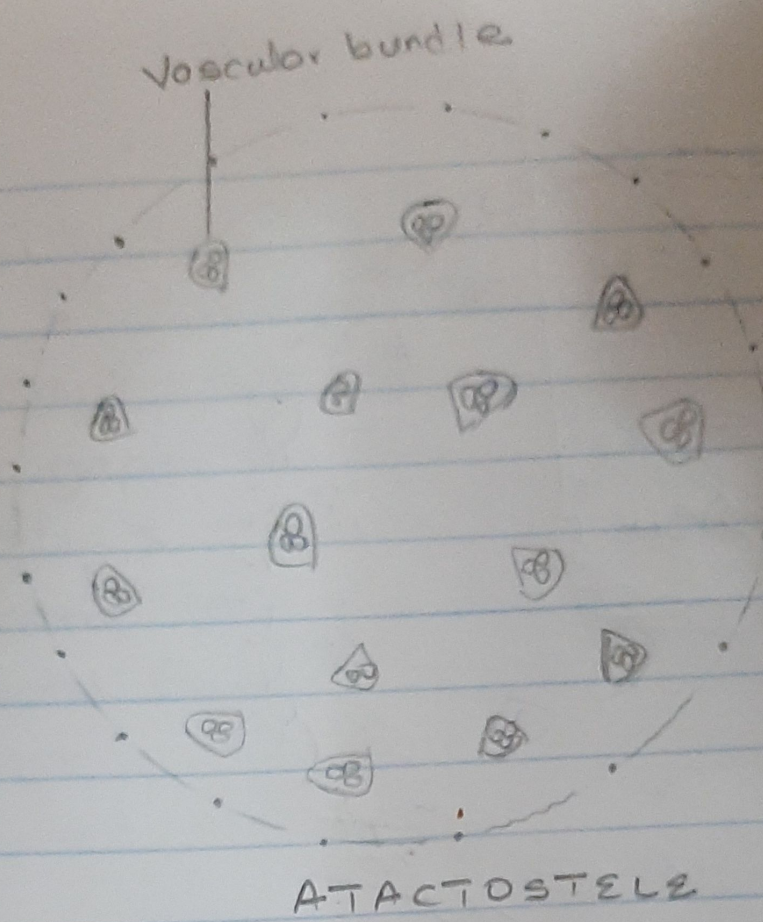
(a) Eustele:

Eustele can be defined as a type of ectophloic siphonstele with overlapping leaf gaps. Occurs parallel to each other and are not distantly spaced. The upper part of a gap overlaps the basal part of the upper adjacent gap. Eustele is the characteristic of gymnosperm and dicotyledonous stem.



### b) ATACTOSTELE:

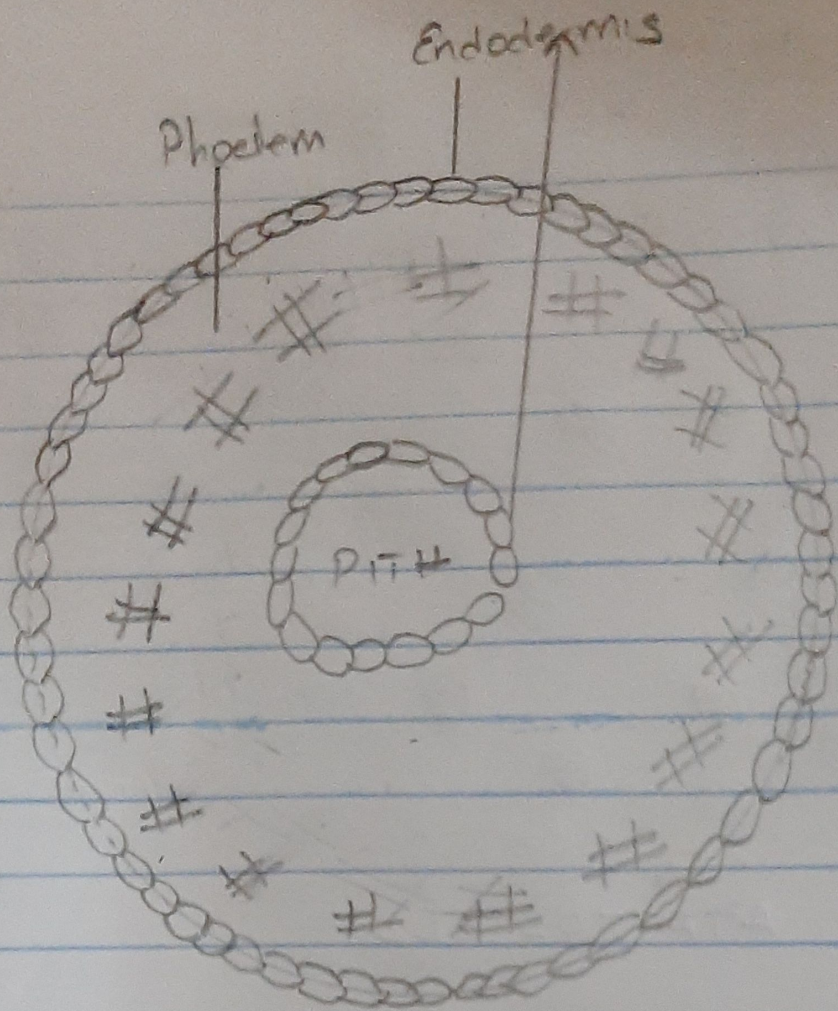
Atactostele can be defined as a type of eustele where collateral vascular bundles are arranged in an irregular manner. It is the characteristic of monocotyledonous stem where there is no distinction between Pith and Cortex.



(c) SIPHONOSTELE:

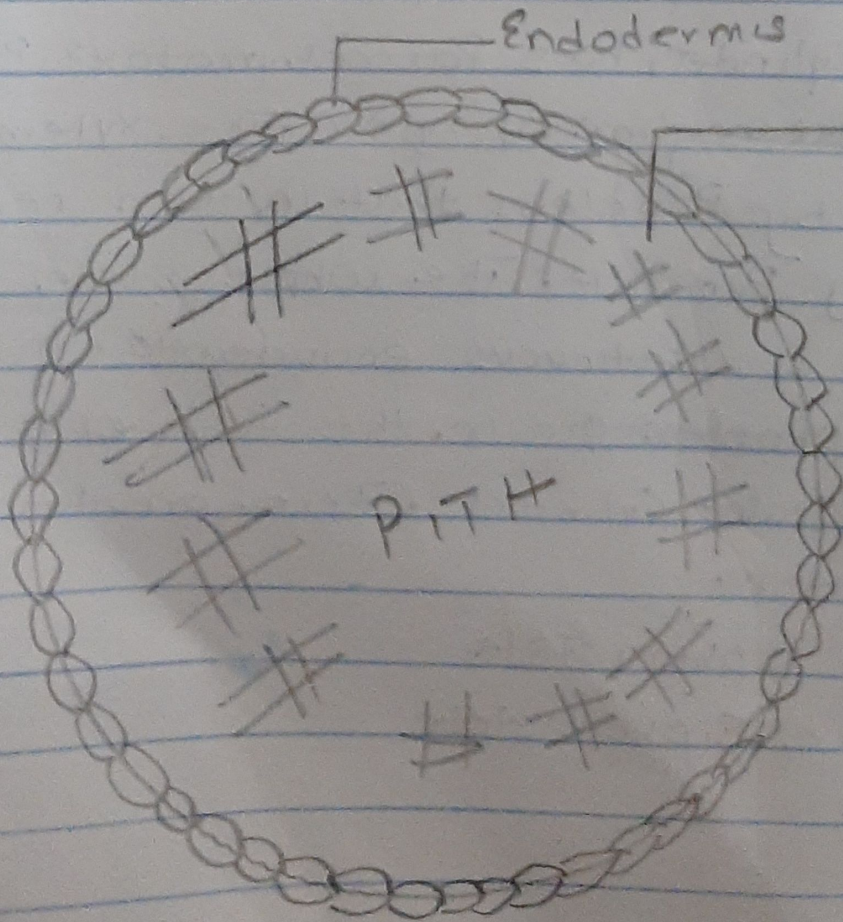
Siphonostele, where xylem is in the form of a hollow cylinder, has parenchymatous pith at the central region of xylem. The xylem is surrounded by phloem that in turn remains encircled by pericycle. The whole stele is limited outside by a continuous endodermis. In siphonostele xylem and phloem are in the form of a continuous or split vascular cylinder. There are two types of siphonostele

- (a) Ectophloic siphonostele
- (b) Amphiphloic siphonostele



AMPHIPHLOIC

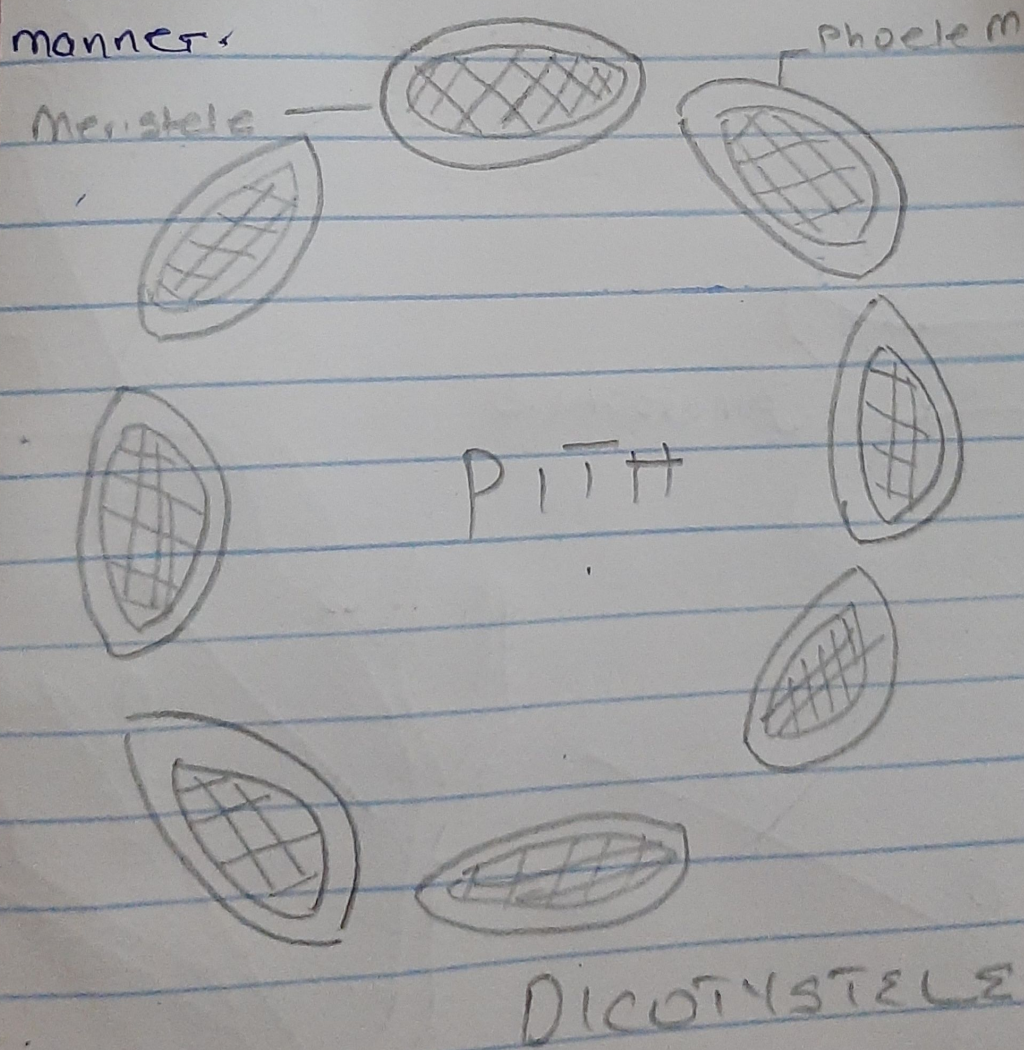
SIPHONOSTELE



ECTOPHLOIC  
SIPHONOSTELE

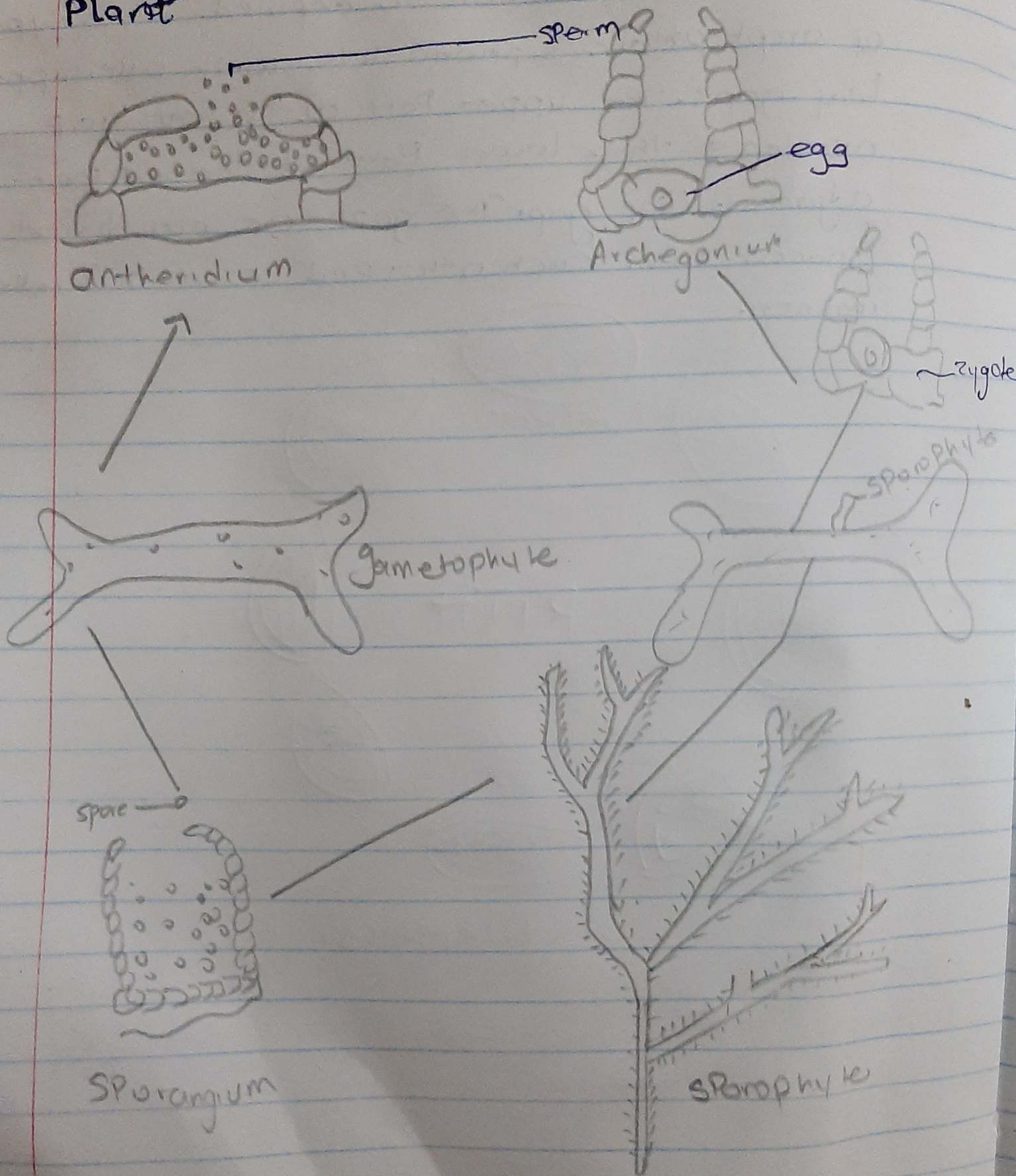
(D) DICOTYSTELE :

Dicotytele can be defined as a type of amphiphloic siphonostele with overlapping leaf gaps. The upper part of a leaf gap overlaps the lower part of the upper adjacent leaf gap. The gaps are not distantly spaced from each other and occur in parallel manner.





Q) illustrate the life cycle of a Primitive Vascular Plant



LIFE CYCLE OF PSILOTUM