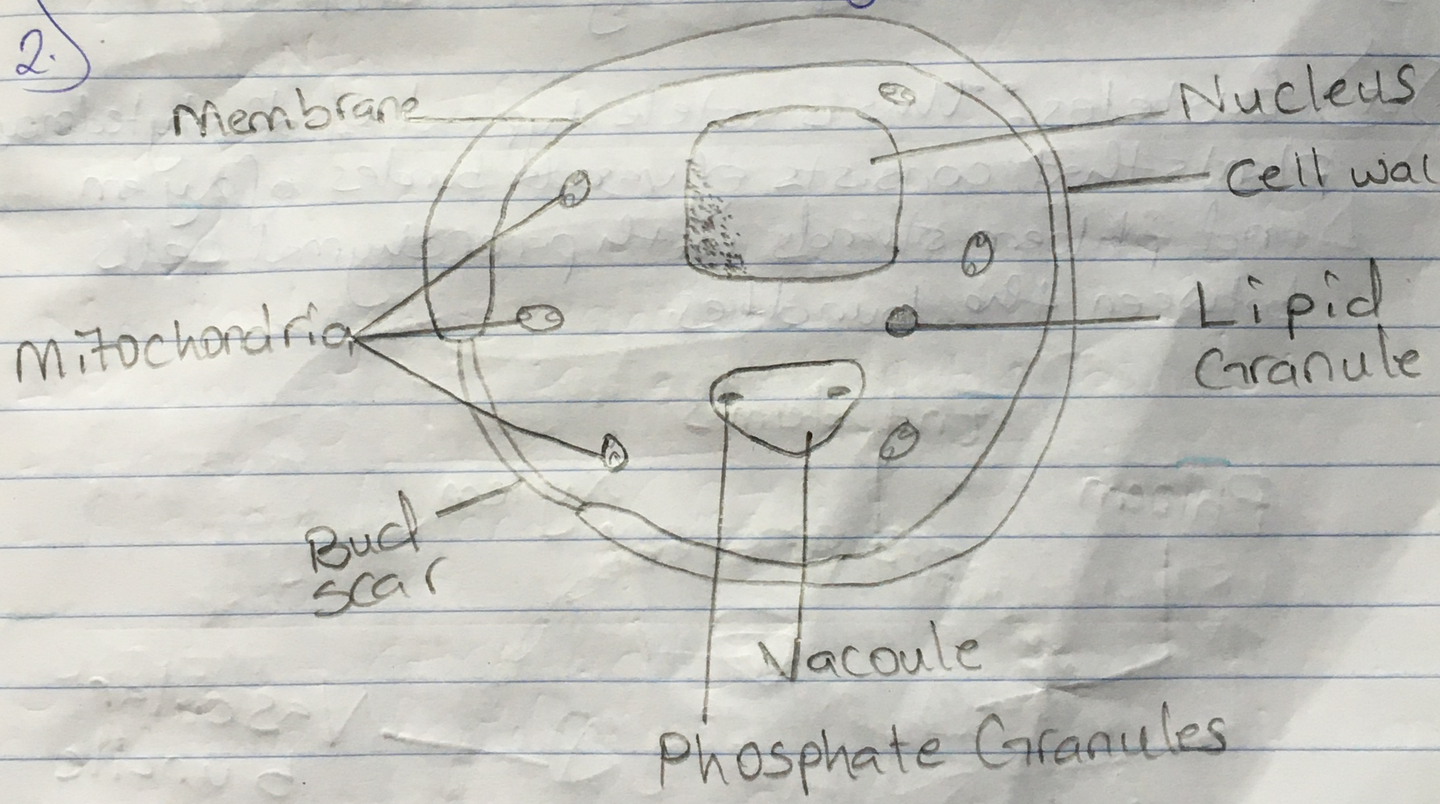
Name: [illegible] GERTRUDE [illegible] LUEBUBE [illegible] LAURA
Matric No: 19/MHS01/170
Department: Medicine & Surgery
Course Code: BIO 102
College: MHS

1a) Fungi are important decomposers in most ecosystems.
b) Fungi play a role in human nutrition in the form of mushrooms
c) Fungi serve as agents of fermentation in the production of bread, cheeses, alcoholic beverages, and other food preparations.
d) Together with bacteria, fungi are responsible for breaking down organic matter and releasing carbon, oxygen, nitrogen and phosphorus into the soil and the atmosphere.
e) They are used as medicines, such as antibiotics and anticoagulants
f) They help to maintain the fertility of the soil.

2.)



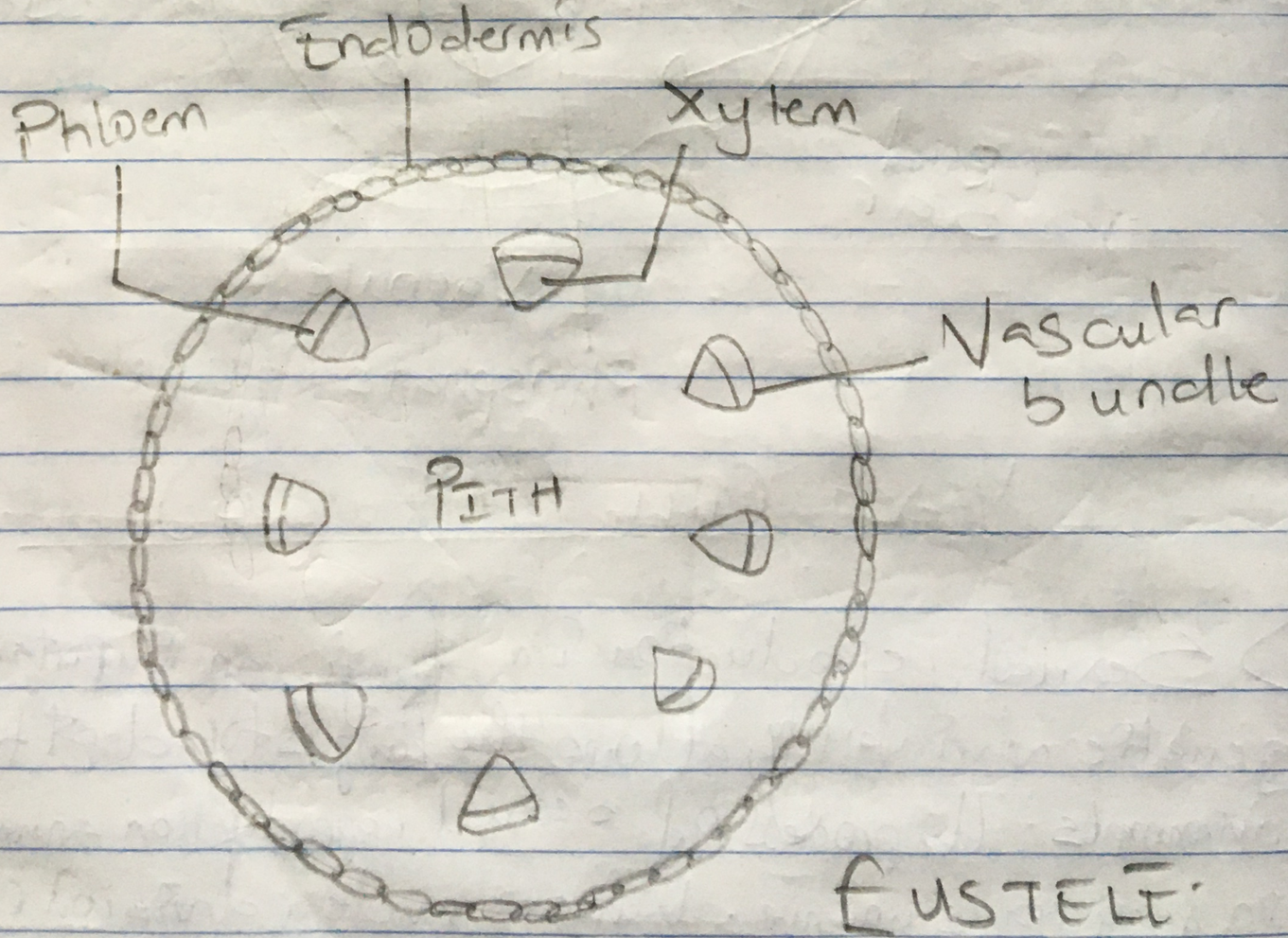
YEAST CELL (A Fungus)

3.) Sexual reproduction in fungi, an important source of genetic variability, allows the fungus to adapt to new environments. The process of sexual reproduction among the fungi is in many ways unique. Whereas nuclear division (mitosis) in other eukaryotes, such as animals, plants and protists involves the dissolution and reformation of the nuclear membrane, in fungi

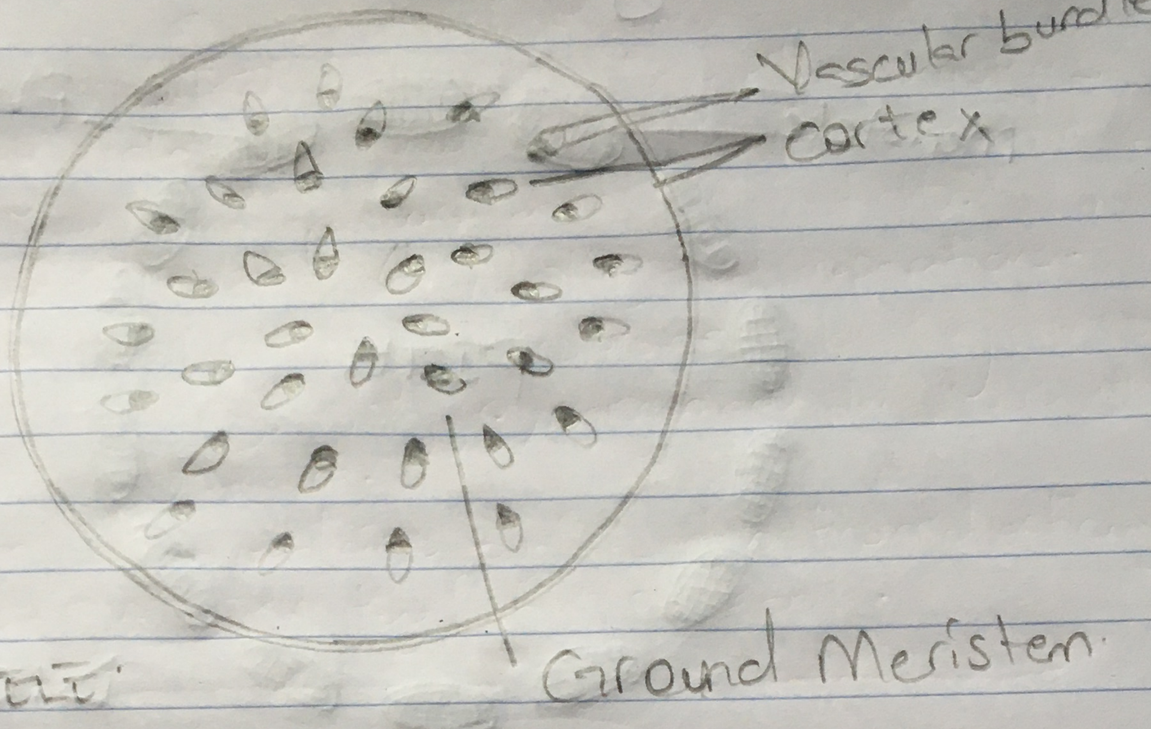
the nuclear membrane remains intact throughout the process although gaps in its integrity are found in some species. The nucleus of the fungus becomes pinched at its midpoint, and the diploid chromosomes are pulled apart by spindle fibres formed within the intact nucleus. The nucleolus is usually also retained and divided between the daughter cells, although it may be expelled from the nucleus, or it may be dispersed within the nucleus but detectable.

4.) i.) The waxy cuticle helps to protect the plants tissue from drying out.
ii.) The gametangia provides further protection against drying out specifically for the plants gametes.
iii.) Spores are dispersed by the wind.

5.) a.) Eusteles: This is a stele typical of dicotyledonous plants that consists of vascular bundles of xylem and phloem strands with parenchymal cells between the bundles.

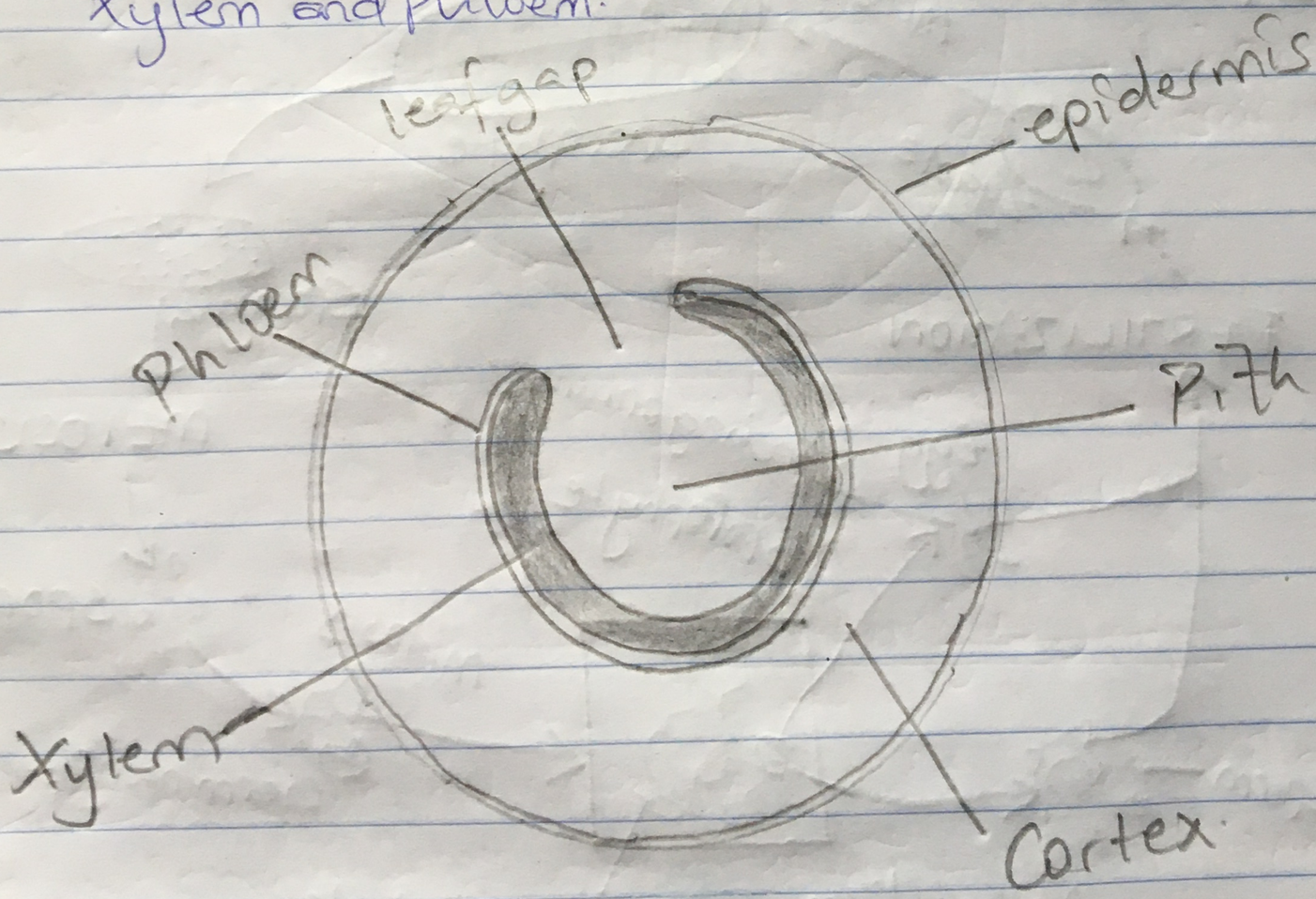


b.) Atactostele: A type of eustele found in monocots, in which the vascular tissue in the stem exists as scattered bundles



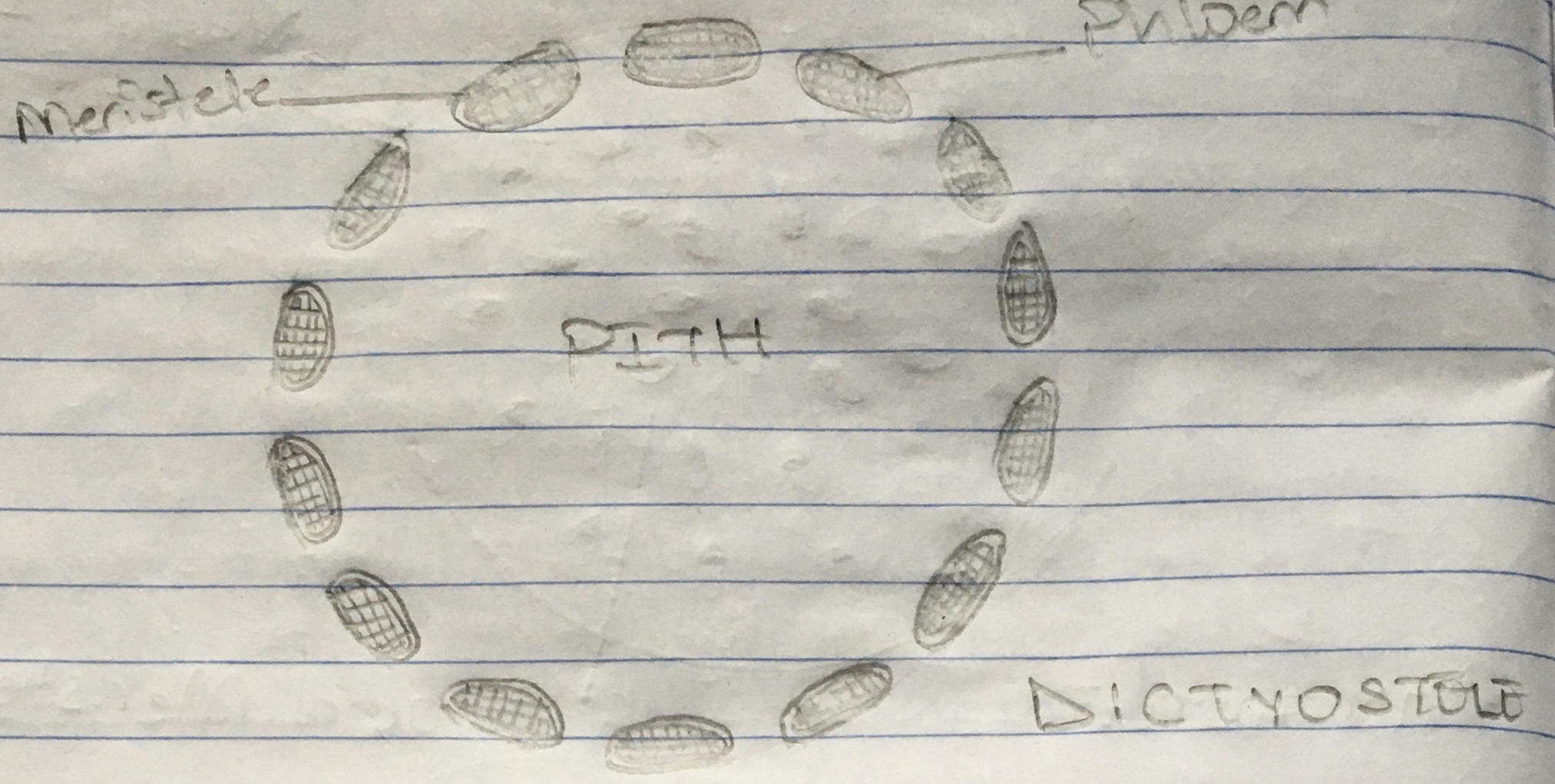
ATACTOSTELE

c.) Siphonostele: A stele consisting of a core of pith surrounded by concentric layers of xylem and phloem.

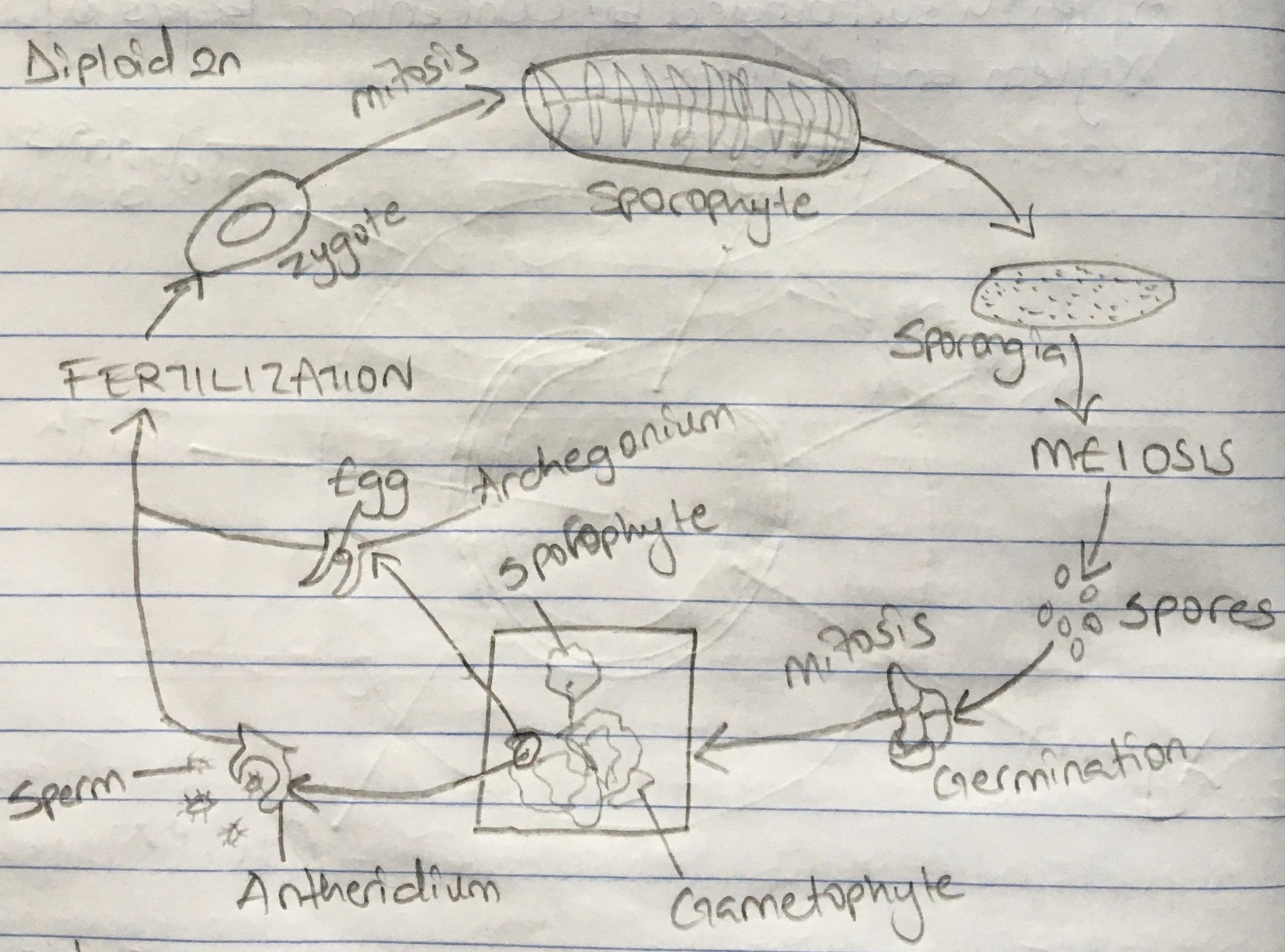


SIPHONSTELE

d.) Dictyostele: A stele in which the vascular cylinder is broken up into a longitudinal series of networks of vascular strands around a central pith (as in many ferns).



6.)



Haploid 1n

LIFE CYCLE OF PRIMITIVE VASCULAR PLANT (FERN)