

ADEOLUNTA ADEBIYI Emmanuel

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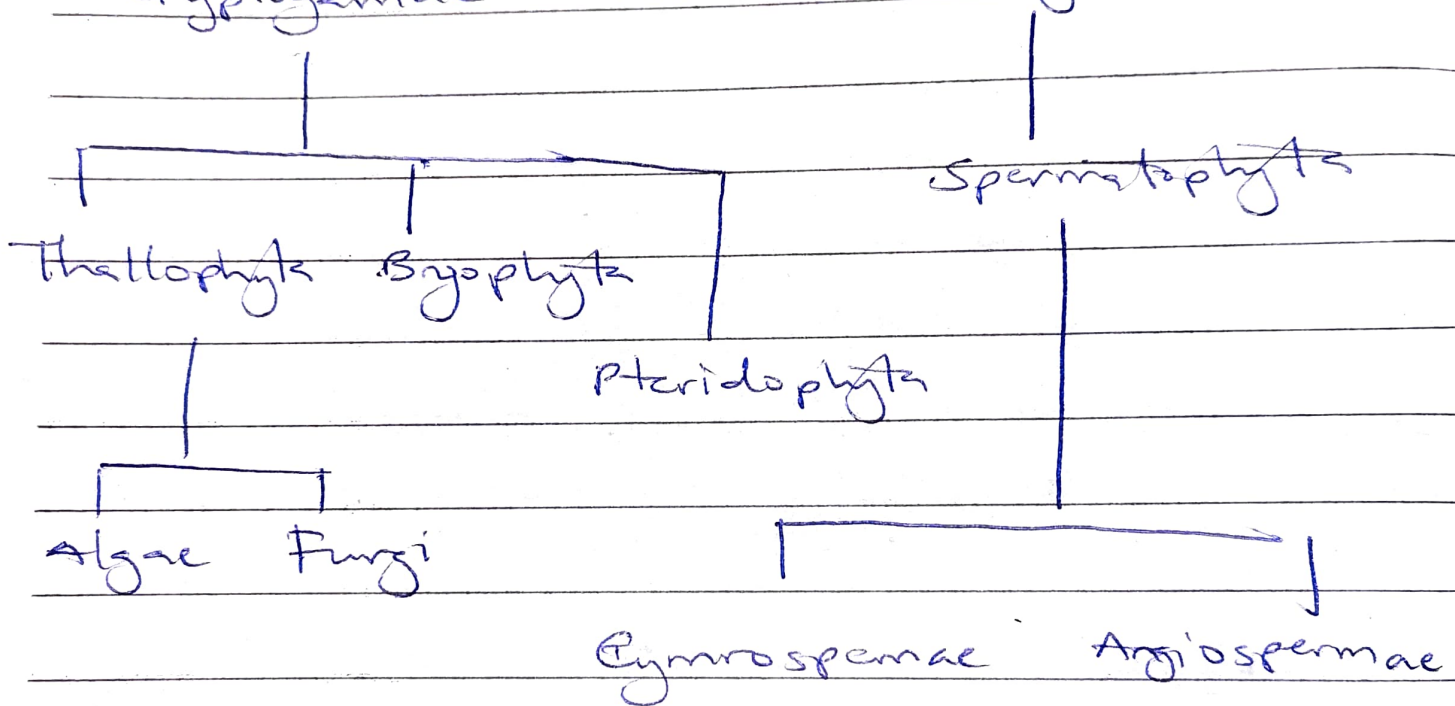
MUS - MBBS

B10102

1. Eichler gave a system of classification.

He classified plants into:

Cryptogamae and Phanerogamae.



2. How are algae of importance to man.

- Algae have and can be used as food, especially marine algae

- Fertilizers: Algae can be used as organic fertilizers, mostly as nitrogen fixing purposes.
- Used in production of agar
- ~~Alga~~ Algae can be used for medicinal purposes.

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3. Describe a unicellular form of algae.

They occur mostly in water e.g. phytoplankton and together with fungi as lichens. They are photoautotrophic and carry out photosynthesis however some are chemoheterotrophic and can obtain from chemical reactions. Example is the commonly known *Chlamydomonas*, it moves via flagella, is covered with a transparent membrane, possessing a large vacuole filled with cell sap; two vacuoles, chlorophyll, a cytoplasm and a nucleus.

4. How does this unicellular alga in question 3 carry out its reproduction.

Chlamydomonas reproduces both sexually and asexually.

It reproduces asexually by

a. zoospore formation.

This occurs in favourable conditions.

The flagella is discarded/retracted, the protoplasm and ~~nucleus~~ divides longitudinally multiple times. Each piece then secretes a wall around it and new flagella grow ~~to the~~ ~~daughter~~. Each zoospore is now fully formed and is liberated by the rupturing of the parent cell wall and develops into a new Chlamydomonas.

It reproduces sexually by

- Isogamy → the protoplasm of the cell divides into many ~~isogametes~~ biflagellate gametes. They therefore form daughter cells.

5) ~~Differentiate between the two types of colonial form of algae.~~

5) Describe a named complex form of alga.

Phytoplankton are autotrophic, photosynthetic components of the algae community and a part of freshwater and salt water basins ecosystems. They include both prokaryotic and eukaryotic forms.