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### Assignment

① Classify plants according to Eichler's grouping of 1883  
Soln

In 1883 A. W. Eichler gave a system of classification for the whole plant kingdom, it is a phylogenetic system of classification of plants.

He classified the plant kingdom into two sub-kingdoms, they are cryptogams & phanerogams.

① Cryptogamae:

They are flowerless and seedless plants, also known as Kryptogams (Kryptos meaning concealed and gamos meaning marriage).

- They include:
- ① Algae
  - ② Bryophytes
  - ③ Pteridophytes

② Phanerogamae:

They are ~~seed~~ bearing plants also known as Spermatophytes (Sperma meaning seed and phyto meaning plant). They are higher plants bodies which have root, stem and leaves with well developed vascular plant system.

- Phanerogamae include:
- ① Gymnosperm
  - ② Angiosperm

② How are algae of importance to man?

Soln

- ① Used in the manufacture of soap and alums
- ② Used in medicine and mineral
- ③ Used as a source of vitamins
- ④ Used as food for man

③ Describe a unicellular form of algae  
Soln

They are plank-like autotrophs and contain chlorophyll. The unicellular form of algae occurs often in fresh water.

④ How does this unicellular algae carry out its reproduction?  
Soln

Unicellular algae carry out reproduction asexually. In small algae it is carried out by ordinary cell division or by fragmentation whereas in larger algae it reproduces by spores.

⑤ Differentiate between the two types of colonial form of algae  
Soln

The blue algae resemble the structure of a cannon ball however the filamentous form of organism are arranged in such a way that they look like a thread.

⑥ Describe a named complex form of algae  
Soln

Gonium is a genus of colonial algae, a member of the order Chlamydomonadales. Typical colonies have 4 to 16 cells, all the same size, arranged in a flat plate, with no anterior-posterior differentiation.

In a colony of 16 cells, four are in the center and other twelve cells are on the four sides with three each.