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ANSWERS

1. Classification proposed by A.W Eichler (1883)

According to this system of classification the plant kingdom is divided into two sub-kingdom; sub-kingdom Cryptogamae and sub-kingdom Phanerogamae

(A) Cryptogamae- is divided into three divisions-

(I) Division Thallophyta: The plant body is not differentiated into root, stem and leaves. These are non-vascular plants in which zygote never develops into multicellular embryo. Thallophyte is divided into two classes I.e Algae and Fungi.

(II) Division Bryophyta: These are simplest non-vascular plants having multicellular embryo, Bryophyta is divided into two classes by Eichler, I.e, Hepaticae and Musci.

(III) Division Pteridophyta: These are the first vascular land plants with multicellular embryo. Pteridophytes are also called vascular cryptogams. These are divided into three classes, I.e, Equisetineae, Lycopodineae and Filicineae.

(B) Phanerogamae- plants with flowers and/or seeds. Phanerogams have two divisions- Gynospermae and Angiospermae.

(I) Division Gymnospermae: These are naked seed plants in which seeds are not enclosed in the ovary and fruit formation is absent.

(II) Division Angiospermae: Seeds are enclosed in the ovary and fruit formation occurs. Depending on the number of cotyledons in the embryo. Angiospermae is divided into two classes: Class Monocotyledonae-plants having single cotyledon
Class Dicotyledonae-plants having two cotyledons.

2. The algae are used as a direct source of food by several sea animals and fishes. The marine algae are rich in iodine and several other important minerals. This makes the fundamental source of food for all marine animals and in this respect sea is the richest food producing area.

3. Chlorophyta or Prasinophyta is a taxon of green algae informally called chlorophytes. ... Like the land plants (bryophytes and tracheophytes), green algae contain chlorophyll a and chlorophyll b and store food as starch in their plastids.

4. Chlorophyta reproduce both sexually and asexually, but usually sexually. Asexual reproduction can occur by fission, fragmentation, or zoospores. Sexual reproduction can be isogamous, anisogamous, or oogamous.

5. Pandorina is a genus of green algae composed of 8, 16, or sometimes 32 cells, held together at their bases to form a sack globular colony surrounded by mucilage while Volvox is a multicellular alga having multicellular motile thallus. Sexual reproduction is oogamous.

6. Charophyta is a group of freshwater green algae, sometimes treated as a division, but also as a

superdivision, or an unranked clade. The terrestrial plants, the Embryophyta most likely emerged within Charophyta, possibly from terrestrial unicellular charophytes, with the class Zygnematophyceae as a sister group.