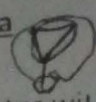


1. ~~Cryptophyta~~ consist of three main groups thallophyte, bryophyte, and pteritophyta
2. The simple plants with stem and leaves but lack true root called bryophyta 
3. All algae are classified according to their color.
4. Usually, movement of algae cells is produced by the action against water with one or more of the protoplasmic extension from one or more
5. List the nine divisions into which algae are classified; 1. Chlorophyta 2. Euglenophyta 3. Basiliophyta 4. Rhodophyta 5. Cyanophyta 6. phaeophyta 7. Chrysophyta 8. Cryptophyta 9. pyrrophyta
6. The primary classification of algae is based on
 - i) Photosynthetic pigment
 - ii) Nature of food
 - iii) Nature of cell wall component
 - iv) Types of flagella
 - v) Details of cell structure
7. The three main photosynthetic pigments in algal divisions
 - i) Chlorophyll
 - ii) Carotenoid
 - iii) Biloprotein
8. What kind of food storage products are found in the following algal divisions
 - i) Chlorophyta—starch
 - ii) Rhodophyta—Floridean starch
 - iii) Cyanophyta—Myxophycean starch
 - iv) Phaeophyta—laminarin laminarin starch
 - v) Euglenophyta—paramylum starch
9. List the material constituents of the walls of an algae
 - i) Cellulose
 - ii) Lipid
 - iii) Organic acid
 - iv) Poly organic acid
 - v) Protein material
 - vi) Peptic/
10. Flagella and zoospores are found in all groups of algae except cyanophyte and rhodophyte
11. What pattern is shown by the fibrils of flagella 9 + 2 pattern
12. The outer extension that bounds flagella is referred to as plasma lamina
13. Vegetative reproduction in algae usually takes place by fragmentation.
14. The short segments from the end of the algal filaments formed when the wall between the cells split or when the cells between dies are called hormogonia.
15. The term gamete is commonly used to refer to any motile cell formed when a vegetative cell reproduces and it is unknown if it is gamete or zoospore. Saxum
16. Produce the special names given to the following under the study of an alga.
 - i) Motile unicells zoospores
 - ii) Non motile asexual spores aplanospore

- iii) Identical spores that are miniature to the parent cell autospore
- iv) New individual that acquires a thick cell wall around them hypospores.

17. What are the sporangia that are recognized in the division phaeophyta

- i) Plurilocular - zoospores and gametes
- ii) Unilocular - zoospores

18. Name the type of sexual reproduction listed below

- i) Only one gamete (sperm) is flagellated and it fuses with a larger non flagellated gamete (egg) oogamy
- ii) Both pair of gametes are flagellated and are similar in type isogamy
- iii) Both gametes are flagellated but are dissimilar in size Anisogamy

19. What is likely to be formed when the current of the zygote divide upon germination?

Zoospores

20. The sequence of phases passed by an algae during growth is termed life history and it consists of two aspects namely morphological and cytological

21. The blue-green pigments found in the primitive algae is characterized by the presence of phycocyanin and chlorophyll

22. In the prokaryotic, there is no definite nucleus any plastids and the protoplast is differentiated into a peripheral colored zone called chromoplasms and an inner colorless portion called central body

23. List the compounds that are likely to be found in the cell wall of a prokaryote

- i) Cellulose
- ii) Peptic compound
- iii) Glycogen

24. The thick walled cells formed after a period of active growth that survive in the dormant stage when condition are unfavorable are termed akinetes

25. The enlarged vegetative cells with transparent contents and a thickened walls present in the filamentous prokaryotes is known as heterocyst

26. What is the main function of the vegetative cells you stated above (0.25)?

They are specialized cells for nitrogen fixation.

27. What is the main differences between the above stated structure (0.25) and a normal vegetative

Heterocysts are much larger than vegetative cells

28. What accounted for the light yellow vegetative structure you stated above (0.25)?

the absence of biloproteins / phycobillins

29. What are the forms in which eukaryotes can exist?

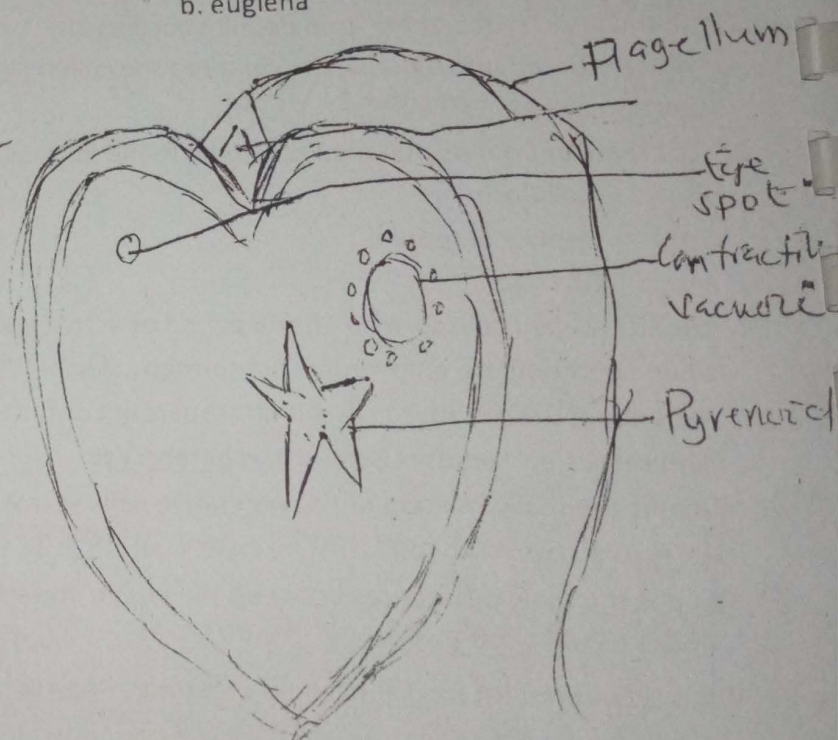
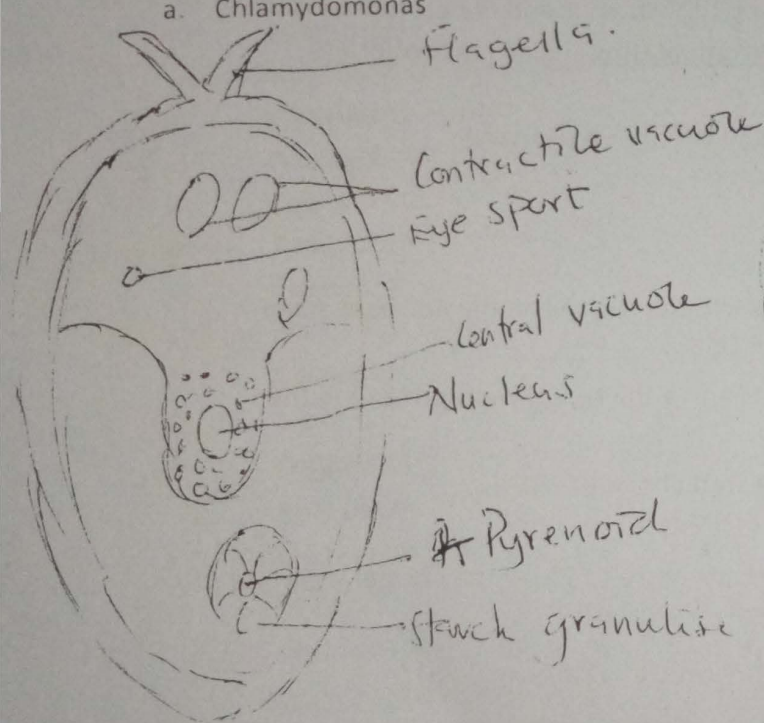
- i) Unicellular
- ii) Multicellular
- iii) Coenocytic

30. The chloroplast of the eukaryotes contain a special protein structure called pyrenoid surrounded by a starch envelop

31. In eukaryotic sexual reproduction, species are said to be homothallic when the pairing gametes are from the same gametes and heterothallic when the pairing gametes are from separate gametes.
32. In green algae, gametes that grows parthenogene without the fusion of the male and the female gametes are termed parthenospores or Azygospores.
33. These gametes (0.32) when produced in spirogyra ^{has no} cilia or flagellum, hence are called Aplanogamete.
34. List the order of origin and the evolution of sexuality in the chlorophyta
Vegetative → asexual → Sexual
35. Under what conditions are the following modes of reproduction exhibited in the chlorophyta?
- Sexual reproduction plant approaches end of its life, (unfavourable cond)
 - Asexual reproduction unfavourable condition (favourable condition)
36. List ten examples of the members of the chlorophyta.
- Spirogyra
 - Chlamydomonas
 - Ulothrix
 - Oedogonium
 - Vaucheria
 - Chara
 - Zygnema
 - Pandorina
 - Eudorina
 - Caulerpa
37. Draw and label the following organisms at the spaces provided.

a. Chlamydomonas

b. euglena



38. List the kind of division which the following chlorophyll are found

- Chlorophyll a. all algae
- Chlorophyll b. chlorophyta/euglenophyta
- Chlorophyll c. bacillanophyta, cryptophyta, chrysophyta, phaeophyta
- Chlorophyll d. rhodophyta

