

BOWEN UNIVERSITY, IWO
DEPARTMENT OF BIOLOGICAL SCIENCES
2010/2011 SECOND SEMESTER EXAMINATION

PLB 304: PLANT PHYCOLOGY

Answer one question from each section.

Time: 2hr 20 mins.

SECTION A

1. (a) Specimen A is an industrial product from a class of algae.
(i) Name this product.
(ii) Name the class of algae producing the substance from which the product is made.
(iii) State **four** other characteristics of this class of algae.
(b) Which organ is responsible for water regulation in *Chlamydomonas*?
(c) How does a *Chlamydomonas* undergoing reproduction adapt to unfavourable condition?
(d) What is isogamy?
(e) What is the major difference between autospores and aplanospores?
(f) Name **two** algae that reproduce through isogamy.
(g) Homogonium is peculiar to which plant reproduction?
(h) Give the correct labels (a-f) for Figure 1.
(i) What is the function of holdfast in *Ulothrix*.

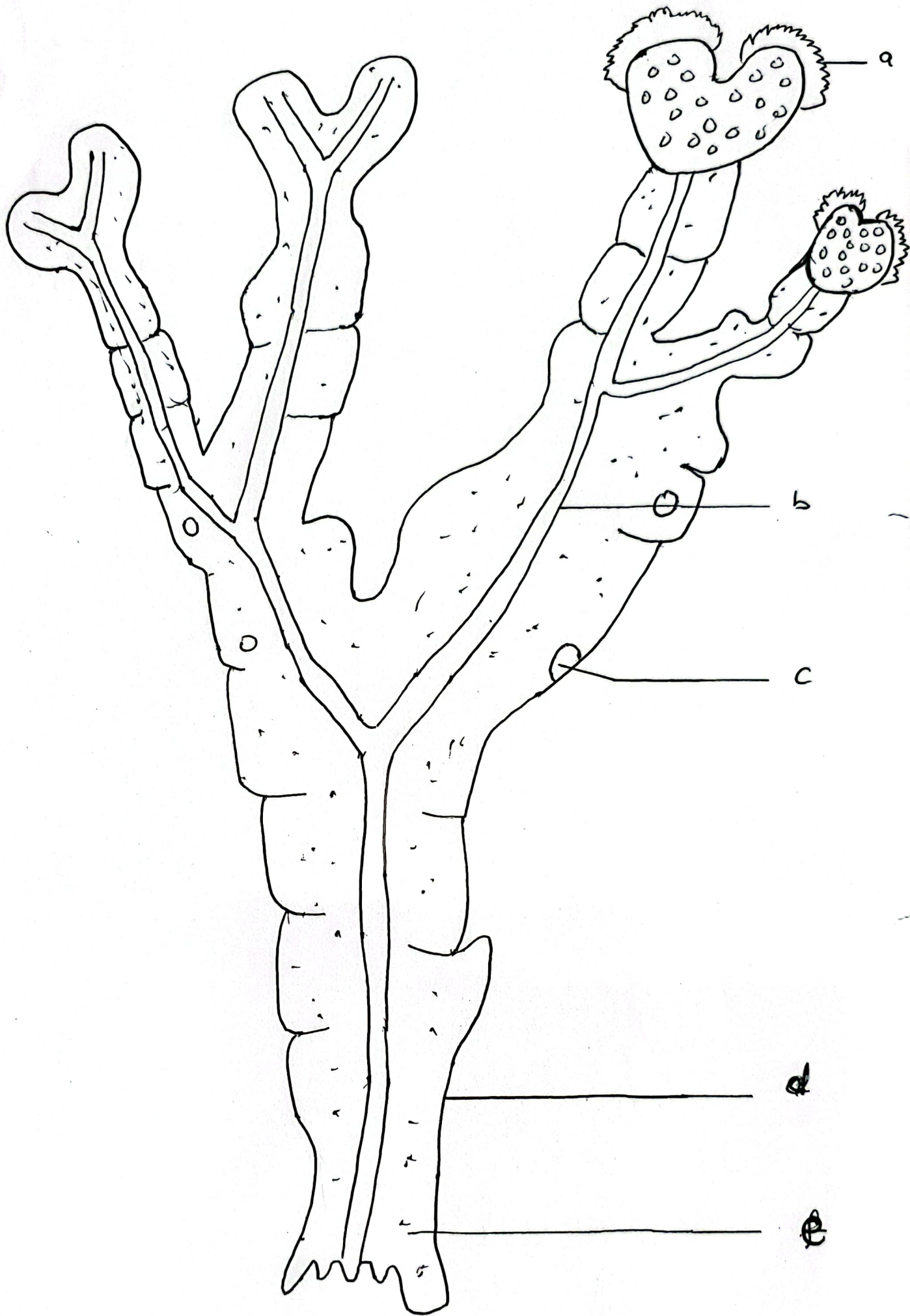
(30 Marks)

SECTION B

2. (a) Give a broad classification of the algae group of plants.
(b) List **two** distinguishing characteristics of four classes. (20 Marks)
3. Discuss the economic importance of algae under the following:
(a) Role in the environment/ecology
(b) Food
(c) Soil improvement/fertilizer
(d) Research (20 Marks)

SECTION C

4. (a) Give an annotated diagram of sexual reproduction in a named Phaeophyta.
(b) How can you differentiate auxospores from other zygotes? (20 Marks)
5. (a) Reproduction in diatom is unique, briefly discuss.
(b) What do you understand by statospore in Xanthophyceae. (20 Marks)



(f)

Title

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