

BOWEN UNIVERSITY IWO
COLLEGE OF AGRICULTURE, ENGINEERING AND SCIENCE
PURE AND APPLIED BIOLOGY PROGRAMME

2021/2022 FIRST SEMESTER EXAMINATION

PAB 311: ALGAE

Instructions: Answer question one and any other two

Time Allowed: 2h 30min.

1. (a) Describe fully the three sexual modes of reproduction in algae. (15 Marks)
(b) (i) Describe Chlorophyta on the basis of their ecological and general characteristics. (10 Marks)
(ii) Draw the general structure of Chlorophyta. (5 Marks)

2. (a) Write briefly on pyrenoids in algae. (5 Marks)
(b) What is/are the reserved food materials in the following classes of algae:
(i) Cyanophyceae
(ii) Chlorophyceae
(iii) Rhodophyceae
(iv) Phaeophyceae (5 Marks)
(c) Describe in detail, the different morphology of algae with an example each. (10 Marks)

3. (a) Describe briefly the Phaeophyta group of Algae using their morphology and ecology. (10 Marks)
(b) How does Phaeophytes differ from other heterokont groups? (5 Marks)
(c) Draw the Light Absorption Spectra of different photosynthetic pigments in Algae (5 Marks)

4. (a) List the general ecology of cyanobacteria. (4 Marks)
(b) State four economic importance of terrestrial cyanobacteria. (8 Marks)
(c) Highlight the importance of Cyanobacteria as an antibiotic. (8 Marks)

5. (a) Describe the Chlorophyll/Chloroplast of algae, stating the types and functions. (10 Marks)
(b) Discuss extensively on the economic importance of algae. (10 Marks)