FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
DEPARTMENT OF PLANT BIOLOGY
SECOND SEMESTER BTECH. EXAMINATION, 2017/2018 SESSION

COURSE CODE: PLB 223
COURSE TITLE: ALGOLOGY
COURSE UNIT: 2
TIME ALLOWED: 1½ HOURS

INSTRUCTION: ***ANSWER ANY THREE QUESTIONS AT LEAST ONE FROM EACH SECTION.***

SECTION A

1. a. With the aid of a diagram, describe the Diplontic life cycle of the Algae.
   b. Define the following terms in relation to Algae:
   i. Monoecious ii. Dioecious iii. Homothallic iv. Heterothallic.
   c. Discuss briefly the evolutionary relationship within the algal divisions.
   d. Outline the various classes of the green algae.

SECTION B

2. a. Enumerate the criteria for classifying algae.
   b. Based on the above criteria, what are the characteristics of the following groups of algae?
   i. Cyanophyta ii. Chrysophyta ii. Xanthophyta iv. Bacillariophyta

3. With the aid of diagrams, write notes on the different morphological forms within the algae.

SECTION C

4. a. Write notes on the three types of Sexual reproduction in algae.
   b. i. Describe the three broad niches of algae in the aquatic environment
   ii. State five adaptations of phytoplanktons.
   c. Copy and complete the following table:
   Current Categorisation of Algae

Dimension (Maximum)	Name	Typical Life Form
	Fermatophytoplankton	
0.2 - 2µm		Unicellular
20 - 200µm		Coenobia
	Macrophytoplankton	

5. a. Explain three (3) factors that can decrease the population density of phytoplanktons.
   b. With the aid of a diagram describe heteromorphic alternation of generation.
   c. State five (5) importance of phytoplanktons.