

**MAASAI MARA UNIVERSITY**

UNIVERSITY EXAMINATIONS 2016/2017

**THIRD YEAR SECOND SEMESTER EXAMINATIONS**

**FOR**

**THE DEGREE OF BACHELOR OF SCIENCE (BOTANY)**

*BOT 314: PHYCOLOGY*

DATE: TIME:

Instructions

Answer **ALL** questions in section **A** and any other **TWO** questions in section **B.** Illustrate your answers with diagrams and give examples where appropriate.

**SECTION A (30 MARKS): ANSWER ALL QUESTIONS**

1. Describe how both photosynthesis and nitrogen fixation occur in a heterocyst.

**(3 marks)**

1. With illustrations distinguish between
   1. A colony of nostoc
   2. Filament with a single trichome
   3. Single cell

**(3 marks)**

1. Describe the distinguishing characteristics of Chlorophyta.

**(3 marks)**

1. Differentiate between isogamy, anisogamy and oogamy

**(3 marks)**

1. Describe asexual reproduction in diatoms.

**(3 marks)**

1. Distinguish between volvocales, chlorocales and oedogoniales.

**(3 marks)**

1. Illustrate the lifecycle of *Botrydium.* **(3 marks)**

1. How is Fucus adapted to its peculiar habitat?

**(3 marks)**

1. Describe Chromatin adaptation in Rhodophyceae.

**(3 marks)**

1. Compare and contrast between red and green algae.

**(3 marks)**

**SECTION B (40 MARKS): ANSWER ANY TWO QUESTIONS**

1. Account for pigmentation in Algae and Cyanobacteria. **(20 marks)**

1. Describe in detail, the economic importance of Algae and Cyanobacteria. **(20 marks)**
2. Describe the various morphological features exhibited by Algae and Cyanobacteria. **(20 marks)**
3. Account for algae and cyanobacteria habitat . **(20 marks)**