CHUKA UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF
BACHELOR OF EDUCATION SCIENCE AND BACHELOR OF SCIENCE

BOTA 232: PHYCOLOGY

STREAMS: BED (SCI), BSC (SCIE) Y2S1 **TIME: 2 HOURS**

DAY/DATE: WEDNESDAY 10/12/2014 **11.30 AM – 1.30 PM**

INSTRUCTIONS:

SECTION A – 30 MARKS

1. (a) State the role of the following algal cell structures

   (i) Eye spot
   (ii) Pyrenoid [2 marks]

   (b) Name the food reserves in the algal divisions-:

   (i) Rhodophyta
   (ii) Euglenophyta
   (iii) Phaeophyta [3 marks]

2. Explain algae that occupy unusual habitats, citing specific examples. [5 marks]

3. (a) Illustrate and differentiate between whiplash and tinsel algal flagella. [2 marks]

   (b) Describe briefly the process of asexual reproduction in dinoflagellates. [3 marks]

4. (a) Identify three characteristics that make blue green algae/cyanophyta be studied as bacteria. [3 marks]

   (b) Name two algal pigments other than chlorophylls. [2 marks]

5. (a) Draw a well labeled diagram of the alga Euglena. [3 marks]

(b) List two methods of asexual reproduction in brown algae. [2 marks]

6. Describe the process of cell fission in diatoms. [5 marks]

SECTION B – 40 MARKS

7. Illustrate the range of vegetative structures / thallus organization in algae and give specific examples. [20 marks]

8. Discuss the economic importance of the algal group phaeophyta. [20 marks]

9. Use flow diagrams to describe haplobiontic and haplodiplobiontic life cycles in algae. [20 marks]
