



UNIVERSITY OF KABIANGA

UNIVERSITY EXAMINATIONS 2016/2017 ACADEMIC YEAR SUPPLEMENTARY/SPECIAL EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE AND BACHELOR OF EDUCATION (SCIENCE)

COURSE CODE: BOT 313

COURSE TITLE: PLANT PHYSIOLOGY I

DATE: 12TH SEPTEMBER, 2017 TIME: 11.30 A.M. – 2.30 P.M.

INSTRUCTIONS TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF (2) PRINTED PAGES

PLEASE TURN OVER

THE UNIVERSITY OF KABIANGA
UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR
THIRD YEAR SECOND SEMESTER EXAMINATIONS
TIME 3 HRS

BOT 313: PLANT PHYSIOLOGY I (Supplementary paper)

SECTION A (28mrks): Answer all questions from this section

1. Evidence indicates that photosynthesis is a two stage process, identify the two processes and state the significance of each. (4 Mrks)
2. Identify four chloroplast pigments found in plants. (4 Mrks)
3. Distinguish between cyclic electron flow and the non cyclic electron flow during light reactions of photosynthesis. (4 Mrks)
4. Distinguish between oxidative phosphorylation and photophosphorylation. (4 Mrks)
5. Describe the structure and functions of chloroplast. (4 Mrks)
6. Describe the major contribution of the cyt b_6f complex. (4 Mrks)
7. State the anatomical differences between a C_3 and a C_4 plant. (4 Mrks)

SECTION B (42MKS): ATTEMPT ANY THREE QUESTIONS

8. a) What is Emerson enhancement effect? (2 Mrks)
b) Discuss the Z scheme model of electron transfer. (12 Mrks)
- 9 a) Describe the CAM pathway of photosynthesis. (7 Mrks)
b) Compare and contrast photophosphorylation and oxidative phosphorylation. (7 Mrks)
- 10 Discuss the C_3 photosynthetic pathway. (14 Mrks)
- 11 Explain how plants biosynthesize starch and sucrose. (14 Mrks)