



(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR

THIRD YEAR 1ST SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN EDUCATION,
BIOLOGY AND BIORESOURCE MANAGEMENT AND
CONSERVATION ⁴²**

COURSE CODE: SBT 312

COURSE TITLE: PLANT PHYSIOLOGY


DATE: 11/09/2017

TIME: 3:00 – 5:00 P.M.

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over 

KIBU observes ZERO tolerance to examination cheating

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QUESTION ONE

- a. Briefly explain the usefulness of transpiration to plants (5 Marks)
- b. Explain the following:
 - i. Incipient plasmolysis (2mks)
 - ii. Source to sink movement (3mks)
- c. Briefly explain why water enters the roots via the root apical-regions (5 Marks)
- d. Water potential is a good indicator of plant health. Justify (5 Marks)
- e. How do plants alter their leaves to protect them from excess sunlight? (5 Marks)
- f. Explain your understanding of the term “plant physiology” (5 Marks)
- g. siology” (5 Marks)

QUESTION 2

- a. Describe the water-conducting system anatomically and explain why it is an efficient tissue for transport of water through the plant (15 Marks)
- b. Distinguish C3 and CAM plants (5 Marks)

QUESTION 3

- a. Describe the respiration apparatus using illustrations (7 Marks)
- b. Describe the electron transport system (8 Marks)

QUESTION 4

Describe the photorespiratory pathway and its relationship with photosynthesis (20 Marks)

QUESTION 5

- a. Explain water movement in tall trees (6 Marks)
- b. Discuss the factors affecting transpiration in plants (8 mrks)
- c. Explain stomata function in plants in relation to its physical and chemical environment (6 mks)