



(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR

THIRD YEAR 1ST SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATION

**FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE AND
BIOTECHNOLOGY**

COURSE CODE: SAB 333
COURSE TITLE: CROP PHYSIOLOGY

DATE: 1ST OCTOBER 2018 **TIME: 11:30 – 1:30 AM**

INSTRUCTIONS TO CANDIDATES

Answer Question ONE and any other TWO Questions.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

1.
 - (a) What are the cardinal temperatures? (2 marks)
 - (b) Explain the Q10 value (4 marks)
 - (c) Which physiological characteristics does a plant adopt to grow in high wind conditions? (4 marks)
 - (d) Describe the physiological processes that occur during seed ripening. (5 marks)
 - (e) Briefly explain at least five different measures for the care of seed during storage. (5 marks)
 - (f) State five key areas of study within plant physiology. (5 marks)
 - (i) Explain the significance of each area in the study of crop physiology. (5 marks)

2. Not all flower buds develop into seeds because casualties occur at various stages from budding to seeding.
 - (a) State the casualties and explain in detail the causes. (10 marks)
 - (b) Discuss why seed vigour is important, mentioning the causes of low vigour. (10 marks)

3. Among the most important molecules for plant function are the pigments. Mention four essential plant pigments and fully explain their role. (20 marks)

4.
 - (a) What is the role of crop physiology in expanding crop yield? (10 marks)
 - (b) Define diffusion and osmosis and explain their role in solute transport. (10 marks)