



(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER
MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE
EDUCATION AND EXTENSION

COURSE CODE: SBT 427

COURSE TITLE: PLANT BREEDING

DATE: 15th December 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

Question 1

- a. Define the following: (4 Marks)
i) Domestication.
ii) Seed dormancy.
- h. State the objectives of plant breeding (5 Marks)
- i. Briefly explain how improved cultivars and hybrids are maintained (4 Marks)
- j. State the genetic resources that are available to a plant breeder. (4 Marks)
- k. Enumerate the traits that breeders have tried to incorporate into crop plants (5 Marks)
- l. Briefly explain the functions of various seed hormones. (4 Marks)
- m. Outline the basic features of plant embryogenesis. (4marks)

Question 2

Describe the techniques used in plant genetic modification. (20 Marks)

Question 3

Describe various stages of seed development highlighting the major events that take place in each stage. (20 Marks)

Question 4

- a. Using a well-labelled diagram describe the structure and composition of a seed.
- b. Outline the genetic determinants of seed structure. (20 Marks)

Question 5

Discuss various mating and reproductive systems in plants. (20 Marks)