(35)

(*Knowledge for Development*)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017 ACADEMIC YEAR

FOURTH YEAR 1ST SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE EDUCATION AND EXTENSION

COURSE CODE: SBT 427

COURSE TITLE: PLANT BREEDING

DATE: 9th October, 2018 **TIME:** 11:30 – 1:30 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

Question 1

a. Define domestication. Briefly discuss the basic requirements and steps of Evolution and Domestication (E/D) (4 Marks)

b. Define landraces and enumerate their characteristics. (5 Marks)

c. Briefly discuss self-incompatibility in plants (5 Marks)

d. Describe the generative stage in seed development (5 Marks)

e. What are the goals of plant breeding? (4 Marks)

f. Briefly discuss the sources of genetic variability in a population (6 Marks)

Question 2

Discuss pollination, fertilization and formation of zygote in plants (20 Marks)

Question 3

Using well labelled diagrams describe the production and development of the male and female gametophytes in plant breeding (20 Marks)

Question 4

Discuss genetic resources with emphasis on VARs Ability, collection and maintenance centers (20 Marks)

Question 5

Discuss breeding for protein quality and quantity in seed crops, cereal storage proteins and their effects on technological properties. (20 Marks)