



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2010/2011
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE AND BACHELOR OF EDUCATION (SCIENCE)
SBT 421: PLANT BREEDING

DATE: Wednesday, 1st December, 2010

TIME: 8.00 a.m. – 10.00 a.m.

INSTRUCTIONS:

Answer **ALL** questions in Section A and **ONE** question in Section B. Answers in Section A should be written in the spaces provided on the question paper.

SECTION A: Short answer questions (5 marks each)

1. List five International Genetic Resource Centres and fill the table below:

Centre abbreviation	Name in full (English)	Crop	Country located

3. List five differences between breeding self-pollinated and cross-pollinated crops.

4. Explain, giving examples the meaning of the following terms in plant breeding

a) Geitonogamy

b) Parthenogenesis

c) Gene for gene relationship

d) Enantiostry

e) NPT

6. Discuss five main factors to consider when choosing a plant breeding method.

7. Briefly discuss tea breeding in Kenya under the following:

a) Main breeding objectives

b) Available genotypes

c) Chromosome number

d) Emasculation

e) Clonal selection

8. Briefly discuss the procedure of releasing new varieties.

SECTION B: ESSAY QUESTION

Answer any ONE question (30 marks)

1. Discuss five common breeding methods.
2. Discuss incompatibility systems and male sterility in crop plants.
3. Write an essay on the main achievements and challenges in plant breeding today.