



KENYATTA UNIVERSITY
EXAMINATION FOR THE DEGREE OF SCIENCE AGRICULTURE AND CROP
IMPROVEMENT AND PROTECTION
KST 111: PLANT GROWTH AND DEVELOPMENT

2ND SEMESTER 2020/2021

TIME: 2 HOURS

SECTION A (40 MARKS) ANSWER ALL QUESTIONS

1. Explain how a chasmogamous bisexual flower prevents self-pollination. (5 marks)
2. Outline the stages of post-fertilization in plants. (5 marks)
3. Describe the process of leaf development. (5 marks)
4. Using a diagram describe the structure of the pollen. (5 marks)
5. Explain the importance of seed dormancy in plants. (5 marks)
6. Distinguish between apomixis and parthenocarpy and list the benefits of each. (5 marks)
7. Outline the differences between adaxial and abaxial surface of the leaf. (5 marks)
8. Briefly explain the mechanisms for self-incompatibility in plants. (5 marks)

SECTION B (30 MARKS) ANSWER ANY TWO QUESTIONS – (15 MARKS EACH)

1. (a) Describe the structure of the embryo sac of a mature angiosperm. (6 marks)
(b) Discuss the various forms of tropism. (9 marks)
2. (a) Describe the process of fertilization in plants. (8 marks)
(b) Discuss the process of gametogenesis. (7 marks)
3. (a) Discuss the various types of meristems in plants. (8 marks)
(b) Discuss the major plant hormones and their role on growth and development. (7 marks)