



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
(BIOLOGICAL SCIENCES)
2nd YEAR 1st SEMESTER 2016/2017 ACADEMIC YEAR
MAIN CAMPUS - REGULAR

COURSE CODE: SBI 3214

COURSE TITLE: PLANT GROWTH AND DEVELOPMENT

EXAM VENUE: BIO LAB

STREAM: (BIO)

DATE: 26/04/06

EXAM SESSION: 9.00 – 11.00 AM

TIME: 2 HOURS

Instructions:

- 1. Answer ALL questions in Section A and Any two questions in Section B**
 - 2. Candidates are advised not to write on question paper**
 - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**
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SECTION A: ANSWER ALL QUESTION (30 MARKS)

1. Describe the processes involved in plant growth and development. (3 marks)
2. State three roles of gibberellins hormones in plant growth and development. (3 marks)
3. Explain how apical dominance leads to growth in plants. (3 marks)
4. State three important reasons for using tissue culture as opposed to seeds in plant establishment. (3 marks)
5. Define the term parthenocarpy and briefly explain how it occurs in plants. (3 marks)
6. Name three factors and briefly explain how they affect plant growth and development. (3 marks)
7. By the use of a simple graph, explain the growth patterns and kinetics of an annual crop. (3 marks)
8. State and briefly explain two types of intraspecific incompatibility as applied in plant growth and development. (3 marks)
9. Differentiate between explant and inoculum (3 marks)
10. Explain what you understand by contamination in tissue culture. Name any three forms of contamination. (3 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

11. Define the term seed dormancy and discuss any five causes and ways of breaking the dormancy caused by each. (20 marks)
12. What does the term “seed longevity” refer to? Briefly state and explain four factors affecting longevity of seeds. (20 marks)
13. Seeds are classified into different categories. State the various forms of classification and in each give brief illustration with relevant examples. (20 marks)
14. Use a schematic diagram to illustrate the various forms of plant culture, and discuss the merits and demerits of three named types of plant culture. (20 marks)