



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF
EDUCATION SCIENCE WITH IT
3rd YEAR 1st SEMESTER 2016/2017 ACADEMIC YEAR
MAIN CAMPUS - REGULAR

COURSE CODE: SBT 301

COURSE TITLE: PLANT GROWTH AND DEVELOPMENT

EXAM VENUE: LAB 13

STREAM: (BED)

DATE: 28/04/16

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**
-

SECTION A: ANSWER ALL QUESTIONS (30 MARKS)

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

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

11. Polar or localized transport of auxin plays an important role in many plant growth and developmental processes. Identify the main types of auxin proteins and discuss how they are involved in different processes or events in plant growth and development (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. Clearly state the various forms of seed classification and in each give brief illustration with relevant examples. (20 marks)
14. Discuss the effects of Hormone herbicides and other herbicides in plant growth and development. (20 marks)