



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY**

**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**

**DEPARTMENT OF BIOLOGICAL SCIENCES**

**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN  
BIOLOGICAL SCIENCE**

**2<sup>nd</sup> YEAR 1<sup>st</sup> SEMESTER 2016/2017 ACADEMIC YEAR**

**MAIN CAMPUS - REGULAR**

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**COURSE CODE: SBI 3214**

**COURSE TITLE: PLANT GROWTH AND DEVELOPMENT**

**EXAM VENUE: LAB 12 STREAM: (BIO)**

**DATE: 18/04/17 EXAM SESSION: 9.00 – 11.00 AM**

**TIME: 2 HOURS**

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**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: SHORT ANSWER QUESTIONS (30 MARKS)**

1. Explain the effects of oxygen supply on plant growth. (3 marks)
2. Explain the Corpus-tunica theory in plants. (3 marks)
3. Briefly describe the mode of action of phytochrome in stimulating and inhibiting flowering. (3 marks)
4. Describe apical dominance in plants. (3 marks)
5. Explain multiplication as a procedure in tissue culture. (3 marks)
6. Describe phyllotaxis in plants. (3 marks)
7. Explain the effect of Abscissic acid in plants under water deficit conditions. (3 marks)
8. Outline the classification of plants based on photoperiodic reactions. (3 marks)
9. Differentiate between initiating and derivative cells in meristems. (3 marks)
10. Outline the desired characteristics of plant species ideal for tissue culture. (3 marks)

**SECTION B: ESSAY QUESTIONS (40 MARKS)**

11. Describe the phases of cell growth. (20 marks)
12. Discuss tropic responses in plants. (20 marks)
13. Discuss the effects of Auxins in plants. (20 marks)
14. Describe the shoot meristem structure. (20 marks)