JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION (SCIENCE)

3RD YEAR 1ST SEMESTER 2013/2014 ACADEMIC YEAR

REGULAR

COURSE CODE: SBT 301

COURSE TITLE: PLANT GROWTH AND DEVELOPMENT

EXAM VENUE:LAB 6 **STREAM: (BSc. Science)**

DATE: 13/8/14 **EXAM SESSION: 2.00 – 4.00PM**

TIME: 2 HOURS

Instructions:

1. **Answer question 1 (compulsory) in Section A and any other 2 questions in Section B .**
2. **Candidates are advised not to write on the question paper.**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room.**

SECTION A (30 MARKS)

1. Distinguish between growth and development in plants (2 marks).
2. Define a meristem and give 3 examples in plants (4 marks).
3. Briefly describe how growth occur as a result of cell expansion (3 Marks).
4. Briefly explain the differences in the developmental mechanisms of plants and animals (3 marks).
5. State the advantages of cryopreseservation (3marks).
6. State four causes of seed dormancy (4 marks).
7. Differentiate between nastic and tropism movements in plants giving an example in each case. (3 marks).
8. Define totipotency and outline its significance to plants (3 marks).
9. Outline any three functions of seed dormancy (3 marks).
10. Define florigens and state it's source and sink sites (2 marks).

SECTION B (40 MARKS)

Attempt any TWO questions

11. Discuss plant hormones that influence growth and development. (20 marks).
12. Explain how Phytochrome works. (20 marks).
13. Discuss photoperiodism and flowering in plants (20 marks).
14. Explain the physics and kinetics of plant and growth (20 Marks)