RONGO
UNIVERSITY COLLEGE

Goldmine of Knowledge and Innovation

(A Constituent College of Moi University)

OFFICE OF THE DEPUTY PRINCIPAL- ACADEMICS AND STUDENTS AFFAIRS

UNIVERSITY EXAMINATIONS 2012/2013 ACADEMIC YEAR

SECOND YEAR FIRST SEMESTER EXAMINATION

FOR
THE DEGREE
IN
BACHELOR OF SCIENCE IN AGRICULTURE

COURSE CODE: CRS 232
COURSE TITLE: PLANT GROWTH AND DEVELOPMENT
DATE: 13 /11/2013 **TIME: 09:00AM – 12.00NOON**

INSTRUCTIONS TO CANDIDATES

- Answer any **FOUR** questions
- Marks are shown at the end of each question
- Show workings in the answer booklet for award of full marks
- Each question should begin on a fresh page
- Time is 2 hours 30 minutes.

THIS PAPER CONSISTS (2) PRINTED PAGES

PLEASE TURN OVER

1. (a) Differentiate between mitosis and cytokinesis as Plant growth processes. [7 marks]

   (b) Explain the different phases of growth curve in higher plants. [10 marks]

   (c). Describe briefly the process by which plants control Vegetative and reproductive growth with respect to nutrients distribution among different parts and organs. [8 marks]

2. (a) Plant structures or organs can be referred to as determinate or indeterminate. Briefly explain the difference in the growth pattern of such structures. [13 marks]

   (b) Explain the difference between differential growth and differentiation. [12 marks]

3. (a) What is a plant hormone?. [2 marks]
   (b) Name five principal hormones common in plants. [5 marks]

   (c) Discuss the mechanisms and cite specific examples how hormones regulate growth and development in plants. [12 marks]
   (d) Briefly explain the main role of Abscisic acid (ABC) in plant dormancy. [6 marks]

4. (a) State four practical applications of growth regulators in commercial crop production. [10 marks]

   (b) Discuss three important environmental factors and how they influence the physiological functions of a plant. [11 marks]

   c) Differentiate between tension and reaction wood. [4 marks]

5. (a) Explain what is meant by environmental stress and how it affects crop physiology. [13 marks]

   (b) Explain adaptation characteristics that shade tolerant crops have that enables them to photosynthesize efficiently under low light intensities. [12 marks]