



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE AGRICULTURE

KST 214: PLANT PHYSIOLOGY

DATE: Thursday 7th April, 2011

TIME: 11.00 am – 1.00 p.m

INSTRUCTIONS

SECTION A: ANSWER ALL QUESTIONS (40 MARKS)

1. Define the following terms as used in Plant Physiology
 - (a) Glycolysis (2.5 marks)
 - (b) Fermentation (2.5 marks)
2. Describe the processes through which C₄ plants avoid photorespiration. (5 marks)
3. List five (5) functions of Phosphorus in plants. (5 marks)
4. List beneficial mineral elements and their role in plant growth and development. (5 marks)
5. Explain mechanisms used by plants to adapt to temperature variations. (5 marks)
6. Outline the processes through which plants take and transport ground water to the rest of the plant. (5 marks)

7. Describe five (5) environmental factors affecting the rate of transcription. (5 marks)
8. Discuss the advantages of micropropagation over the traditional plant propagation techniques. (5 marks)

SECTION B: Answer any *TWO* Questions (30 Marks)

9. Sketch a cellular respiration chart, showing the three stages of the process of respiration in plants. (15 marks)
10. Discuss the role of Absciscic Acid in plants. (15 marks)
11. Discuss the importance of vacuole in a plant cell. (15 marks)
12. Describe the process of stomata opening in higher plants. (15 marks)