



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE (COASTAL AND MARINE RESOURCE MANAGEMENT)

SMR 101: PLANT STRUCTURE AND PHYSIOLOGY

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DATE: TUESDAY 3RD APRIL 2012

TIME: 2.00 P.M. – 4.00 P.M.

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INSTRUCTIONS

Answer **ALL** questions in Section A and **ANY ONE** Question in Section B.

Answers to questions should be concise and should be written in the booklet provided. Use illustrations and examples where appropriate. Questions in each section carry equal marks.

SECTION A: SHORT ANSWER QUESTIONS (40 MARKS)

1. Explain the photoperiodic response in plants.
2. Differentiate between the C₃ and C₄ plants.
3. Explain the role of microorganisms in the nitrogen cycle.
4. Outline the importance of meristems in plants.
5. Describe an experiment to demonstrate phototropic movement in plants
6. Describe the crassulacean acid metabolism pathway in plants.
7. State the characteristics of water transportation and food translocation tissues in angiosperms.
8. Describe the structure of the plant cell wall.

SECTION B: ESSAY QUESTIONS (30 MARKS)

9. Describe the pathways involved in the metabolism of carbohydrates.
10. Describe the biosynthesis of Indole-3-acetic acids in plants.
11. Describe the mode of action of plant hormones.