



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2009/2010
INSTITUTE OF OPEN LEARNING EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE AND BACHELOR OF EDUCATION

SBT 310: PLANT BIOCHEMISTRY AND PHYSIOLOGY

DATE: Thursday 18th February, 2010

TIME: 11.00 a.m. – 1.00 p.m.

Instruction: *Answer ALL questions in Section A and any ONE in Section B. Answers to Section A should be concise and written in the spaces provided.*

SECTION A: Short Answers Questions (5 marks each)

1. Briefly discuss the assimilation of inorganic nitrogen in plants.

2. How are triglycerides degraded in plant metabolism?

3. Briefly discuss the accumulation of organic acids in various plants.

4. (a) State the characteristics of coenzymes.

(b) What are the roles of the following vitamins in plant metabolism?

(i) Biotin

(ii) Vitamin B₂

(iii) Ascorbic acid

(iv) Pantothenic acid

(v) Niacin

(vi) Vitamin B₁

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SECTION B: Essays (30 Marks each)

1. Write an essay on the synthesis of plant proteins.
2. Discuss how light energy is converted to chemical energy in the light phase of photosynthesis.
3. Compare and contrast the degradation of starch and cellulose in plants.