



Uva Wellassa University
Faculty of Animal Science and Export Agriculture
BSc in Export Agriculture
BSc in Tea Technology and Value Addition

End Semester Examination- September/ October 2015
Year II Semester I



Plant Physiology and Crop Production (EAG 251-2)

Instructions

Answer all questions

No. of question : Two (02)

No. of pages : Two (02)

Time : One hour (1 hr)

Total marks allocated : 50 %

PART III – ESSAY

Question 01

(25 marks)

Briefly explain how the molecular reactions of photosynthesis transform light energy into chemical bond energy. Indicate the relationship between chloroplast structure, light and dark reactions.

Question 02

- I. Describe the components of water potential, highlighting the importance of the water potential concept in plant physiology. (10 marks)

II. Consider the given composition of seeds of two different cultivars.

Biochemical Compound	Cultivar A (Traditional variety)	Cultivar B (Improved variety)
CHO	50 %	30 %
Protein	30 %	40 %
Lipid	16 %	26 %
Ash	4 %	4 %

If the yield of cultivar A is 5 mt/ ha,

- a) What is the yield of cultivar B? (10 marks)
- b) What is the reason for the difference in yields of the two cultivars? (05 marks)

(Production values of CHO, Proteins, Lipids and Ash are 0.86, 0.45, 0.36 and 0.1 respectively).

Assumption: Cultivars are equal in all other aspects.

