

Uva Wellassa University
Faculty of Animal Science and Export Agriculture

BSc in Tea Technology and Value Addition
BSc in Export Agriculture

End Semester Examination - March/April 2013
Year II Semester I

Plant Physiology & Crop Production-(EAG 251 -2)



Instructions

Answer **Three (03)** questions including question 01.

No. of question : Four (04)

No. of pages : Two (02)

Time : One hour (01)

Total marks allocated : 100 %



Part III – Essay

Question 01

Write **short** descriptions on **three (03)** of the following;

(30 marks)

- a. Factors affect on transpiration
- b. Physiological basis of crop yield improvement
- c. Drought avoidance adaptations of plants
- d. Relative Growth Rate (RGR)

Question 02

a. Discuss **major** differences between C3 and C4 photosynthetic pathways.

(20 marks)

b. **Briefly** discuss stages of cellular respiration.

(15 marks)

Question 03

a. Define the following terms which related to plant physiology;

(10 marks)

I. Sink

II. Source

b. Using an appropriate diagram, **briefly** explain how assimilates are transported from a source to a sink.

(25 marks)

Question 04

Consider the given composition of seeds of two different cultivars. If the yield of cultivar A is 5 mt/ ha,

- a. What is the yield of cultivar B? (30 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 aspects.

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