

KERALA AGRICULTURAL UNIVERSITY

B.Sc Hons (Ag) 2011 Admission
IVth Semester Final Examination- August-2013

Cat. No: Crps.2201

Marks: 80

Title: Crop Physiology (2+1)

Time: 3 hours

I. Fill up the blanks

(10 x 1 = 10)

1. Antisenescence hormone is -----
2. Reaction center for photosystem II is -----
3. Seeds of leguminosae members have ----- dormancy
4. First stable carbon compound formed in C4 plants is -----
5. At field capacity, water potential of soil is -----
6. Hydrogen atoms attached to oxygen at an angle of -----
7. Highly immobile major element in plant is -----
8. Plant hormone normally accumulates during any kind of stress is -----
9. TCA cycle is also called as -----
10. Whiptail disease in cauliflower is caused due to the deficiency of -----

II. Write short notes/answers on Any Ten:

(10 x 3=30)

1. Non-Cyclic photophosphorylation
2. Photoperiodism
3. Transpiration pull theory
4. Antitranspirants
5. Photorespiration
6. Seed viability
7. Glycolysis
8. Passioura's yield model
9. Hydroponics and aeroponics

10. Phloem loading and unloading
11. Cyanide resistant pathway
12. NAR and CGR

III. Write short essays on ANY SIX of the following:

(6 x5=30)

1. Evolution and significance of CAM plants
2. Determinate and indeterminate growth and their significance
3. Physiological importance of water in plants
4. Causes of seed dormancy and methods to break them
5. Physiological and biochemical changes occur during seed germination
6. Photophosphorylation and oxidative photophosphorylation and their significance
7. Growth, growth rate curve and growth indices
8. Plant water relations

IV. Write essay on ANY ONE:

(1 x10=10)

1. How do you prove the essentiality of an element? Classify the essential elements based on requirement, mobility and biochemical functions? Discuss why nutrient deficiency symptoms generally appear on the foliage.
2. What are plant hormones? What are the general characteristic features of plant hormones? Discuss the importance of plant hormone in the field of agriculture, horticulture and industry.