

KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Ag. 2013 Admission

IVth Semester Final Examination- July/August-2015

Cat. No: Crps.2201

Title: Crop Physiology (2+1)

Marks: 50

Time: 2 hours

I Choose the correct answer/ Name /Fill up the blanks/State True or False (10 x 1=10)

1. Distilled water is an example for hypotonic solution(True/False)
2. Example for an endospermic dicot seed _____
3. Plant hormone used to substitute the low temperature requirement of plants in flowering
4. Antisenescence hormone
5. Precursor of ethylene
6. Name the growth regulator commercially used to reduce the problem of biennial bearing in mango
7. Principal C₄ acid transported to the bundle sheath cell in NADP –ME type C₄ plants
8. Cell organelle concerned with glycolate metabolism of photosynthesis
9. When a molecule lose an electron the molecule is said to be _____
 - a. Oxidized
 - b. Reduced
 - c.) Gained energy
10. Water selective channel proteins in cell membrane
 - a) Aquaporin
 - b.) Proteins
 - c.) Rubisco

II Write short notes on any FIVE

(5 x 2=10)

1. Distinguish between Pasteur effect and Warburg effect
2. What is seed dormancy and how it is classified
3. What is sigmoid curve? Explain various phases of sigmoid curve
4. Define water potential and mention the significance of water potential
5. What is photoperiodism? How the plants are classified based on photoperiodism
6. Physiological functions of Gibberellins in plants
7. Factors affecting transpiration

III Write short notes on any FIVE

(5 x 4=20)

1. Significance of C₃, C₄ and CAM plants
2. Foliar deficiency symptoms of phosphorous, potassium and calcium in plants
3. Alternate respiration and its significance in crops
4. Source sink concept and mechanism of Phloem loading and unloading
5. Explain glycolysis with flow chart
6. Senescence mechanism and different types of senescence
7. Respiratory ETS and its significance

IV Write essay on ANY ONE

(1 x10=10)

1. Discuss the physiological role of mineral nutrients in plant growth and development
2. Explain Photosynthetic Electron Transport System (PETS) and Mitochondrial Electron Transport System (METS) with suitable flow charts
