## KERALA AGRICULTURAL UNIVERSITY

## B.Sc (Hons.) Ag. 2013 Admission

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	$=(10 \times 1=10)$
<ol> <li>Distilled water is an example for hypotonic solution(True/False)</li> </ol>	
Example for an endospermic dicot seed	
3. Plant hormone used to substitute the low temperature requirement of plan	its in flowering
4. Antisenescence hormone	
5. Precursor of ethylene	
<ol> <li>Name the growth regulator commercially used to reduce the problem of mango</li> </ol>	f biennial bearing in
7. Principal C4 acid transported to the bundle sheath cell in NADP –ME typ	e 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)
Distinguish between Pasteur effect and War burg 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 photoper	iodism
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 C <sub>3</sub> , C <sub>4</sub> and CAM plants	
2. Foliar deficiency symptoms of phosphorous potassium and calcium in pla	nts

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

IV Write essay on ANY ONE

 $(1 \times 10 = 10)$ 

- 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

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