

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE  
SEMESTER END EXAMINATION

B.Sc. (Hons.) Horticulture

Semester : I (New)	Term : I	Academic Year : 2019-20
Course No. : H/BOT 111	Title : Introductory Crop Physiology	
Credits : 2(1+1)	Time : 10.00 to 12.00	Total Marks : 40
Day & Date : Friday, 03.01.2020		

- Note : 1. Solve ANY EIGHT questions from SECTION "A".  
2. All questions from SECTION "B" are compulsory.  
3. All questions carry equal marks.  
4. Draw neat diagrams wherever necessary.

Shri. Srinivas, College of Horticulture  
AASAVATI  
Library Department

SECTION "A"

- Q.1 Define Plant Physiology. Give the scope of Plant Physiology in relation to crop productivity.
- Q.2 Define ascent of sap. Enlist different theories of it and describe the most acceptable theory.
- Q.3 Define transpiration. Give its significance in plants and explain different types of transpiration.
- Q.4 Define water potential. Describe different components of water potential.
- Q.5 Define mineral nutrition and give the functions of mineral elements in plants. Describe role of phosphorus in plant metabolism.
- Q.6 Distinguish between. (Any Two)  
a) Diffusion and Osmosis  
b) Cyclic and non cyclic photophosphorylation  
c) C<sub>3</sub> and C<sub>4</sub> plants
- Q.7 Define photosynthesis. Give in detail the stepwise reaction of Hatch Slack cycle.
- Q.8 Describe process of root nodule formation in biological nitrogen fixation.
- Q.9 Write short notes. (Any Two)  
a) Secondary metabolites  
b) Photorespiration  
c) Function of chloroplast
- Q.10 Define stress. Enlist different types of stress and describe mechanism of drought resistance.

SECTION "B"

- Q.11 Define the following terms.  
1) Guttation  
2) Permanent Wilting Percentage  
3) Pigments  
4) Antitranspirant
- Q.12 Give full forms of the following.  
1) CAM  
2) RWC  
3) PAR  
4) DPD

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