MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: **III (Old)**	**Term**	: **I**	**Academic Year**	: **2018-19**
Course No.	: BOT 234	**Title**	: **Crop Physiology**		
Credits	: 3(2+1)				
Day & Date	: Friday, 16.11.2018	**Time**	: 9.00 to 12.00	**Total Marks**	: **80**

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.

SECTION "A"

Q.1 Define Crop Physiology. Describe in brief scope and importance of Crop Physiology in Agriculture.

Q.2 Define photosynthesis and describe in detail role of plant pigments in photosynthesis.

Q.3 Define transpiration. Write the different types of transpiration. Explain in detail about factors that affect transpiration.

Q.4 Enlist the criteria for essentiality of elements and write in short deficiency symptoms and function of following elements.

a) Nitrogen b) Copper

Q.5 Describe the reaction of Kreb's cycle.

Q.6 Distinguish between the following.

a) C_3 and C_4 Plant b) Transpiration and Guttation

c) Aerobic respiration and Anaerobic respiration d) Macronutrient and Micronutrient

Q.7 Write short notes.

a) Source - sink relationship b) Hydroponics

c) Photorespiration d) Antitranspirant

Q.8 Write in detail about pathway of water across the root cells and enlist the factors affecting process of absorption

Q.9 Define photoperiodism. Give the classification of plants on the basis of photoperiodism.

Q.10 Give the classification of plant growth substances and write in detail about physiological role of Auxine and Gibberelin in plant.

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SECTION "B"

Q.11 Fill in the blanks.

1) Guttation takes place through a specialized structure called_____.
2) _____ are called upward conducting tissue.
3) _____ is the most commonly used plant hormone for rooting of cuttings.
4) Deficiency of Mo causes _____disease.
5) Outer wall of the guard cell is _____ than inner wall.
6) For fruit ripening _____ is the important growth substance.
7) The net gain of ATP in aerobic respiration is_____.
8) Ca is _____element.

Q.12 a) Give full forms of the following

1) CAM
2) PWP
3) R Q
4) CCC

b) State True or False.

1) Light reaction of Photosynthesis takes place in chloroplast.
2) End product of glycolysis is pyruvic acid.
3) R.Q. value of oil seed for eg. groundnut or linseed is one.
4) GA is a growth inhibitor.

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