MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: **III (New)**	**Term**	: **I**	**Academic Year**	: **2017-18**
Course No.	: BOT 234	**Title**	: **Crop Physiology**		
Credits	: 3(2+1)				
Day & Date	: Friday, 17.11.2017	**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 plant growth regulator. Enlist the various types of plant growth regulators. Give the physiological role of Gibberellins and Auxin.

Q.2 Define the term crop physiology. Give the importance and scope of crop physiology in relation to crop productivity.

Q.3 Define transpiration. Give its significance in plant and explain the mechanism of opening and closing of stomata.

Q.4 What is photosynthesis? Explain in detail various factors affecting photosynthesis.

Q.5 What is nutriophysiology? Write the general functions of mineral nutrients. Give deficiency symptoms of Nitrogen and Boron.

Q.6 Define growth. What are the growth characteristics? Give the formulae for AGR, LAI, HI and NAR.

Q.7 Answer the following questions.

a) Explain in short climacteric and non- climacteric fruits.

b) Give the classification of senescence along with its examples.

c) Write in short about components of water potential.

d) What is translocation of solute and enlist pathways of translocation of solute.

Q.8 Define respiration. Describe the process of Glycolysis and enlist various factors affecting rate of respiration.

Q.9 What is fruit ripening? Describe hormonal regulation of the fruit ripening.

Q.10 Distinguish between (Any Two).

a) Light reaction of photosynthesis and dark reaction of photosynthesis

b) Monocarpic species and polycarpic species

c) Short day plants and long day plants

d) Active absorption of water and passive absorption of water

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SECTION "B"

Q.11 a) Define the following terms.

1) Water use efficiency
2) Photorespiration
3) Imbibitions
4) Vernalization

b) Give full forms of the following.

1) CAM
2) CCC
3) RGR
4) PWP

Q.12 Match the following pairs.

"A"	"B"
1) C_4 plant	a) Programmed cell death
2) Hydathodes	b) Pyruvic acid
3) IAA	c) Translocation of food
4) Granna	d) Maize
5) Photosynthesis	e) Natural Auxin
6) Glycolysis	f) Chloroplast
7) Senescence	g) Light reaction
8) Phloem	h) Guttation

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