

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END THEORY EXAMINATION

B.Sc.(Hons.) Agriculture

Semester	: II (New)	Term	: Second	Academic Year	: 2023-24
Course No.	: BOT 121	Title	: Fundamentals of Crop Physiology		
Credits	: 2 (1+1)				
Day & Date	: Wednesday, 15.05.2024	Time	: 10:00 to 12:00 hrs.	Total Marks	: 40

- 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 diagram wherever necessary.

SECTION 'A'

- ~~2Q.1~~ Define Crop Physiology. Describe the scope and importance of Crop Physiology in Agriculture.
- \ Q.2 Enlist different cell organelles. Describe mitochondria in detail.
- Q.3 Define Plant Growth Regulator. Enlist the different types of plant growth regulators. Describe the role of cytokinins.
- ~~2Q.4~~ Define Photosynthesis. Describe the Hatch-Slack Cycle.
- \ Q.5 Define Respiration and describe the factors affecting respiration.
- \ Q.6 Define Criteria of essentiality of mineral element and describe the role of nitrogen in plant metabolism.
- ~~2Q.7~~ Define Transpiration. Write down the factors affecting transpiration.
- ~~2Q.8~~ Write short notes on:
- a) Growth curve
 - b) Classification of plants based on photoperiodism
- Q.9 Describe physiological aspect of growth and development in Rice and Chickpea.
- ~~2Q.10~~ Define Ascent of sap. Enlist different theories of ascent of sap and describe the most acceptable theory.

SECTION 'B'

Q.11 Define the following terms:

- 1) Permanent Wilting Percentage
- 2) Water Potential
- 3) Photolysis
- 4) Vernalization

Q.12 Match the pairs:

'A'

- 1) Warburg
- 2) Sach's
- 3) Yabuta and Hayashi
- 4) Emerson effect

'B'

- a) Red drop phenomenon
- b) Coined the term 'Gibberellin'
- c) Starch as a first visible product of photosynthesis
- d) First used Chlorella to study photosynthesis

