

**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.	: AGRO 123	Title	: Fundamentals of Agronomy-II		
Credits	: 2 (1+1)	Time	: 10:00 to 12:00 hrs.	Total Marks	: 40
Day & Date	: Friday, 10.05.2024				

- 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'**

- ~~Q.1~~ Define Irrigation and state the role of water in plants.
- ~~Q.2~~ Enlist the methods of irrigation and explain in brief about drip irrigation.
- Q.3 Describe the process of water absorption and give the factors responsible for it.
- Q.4 Define Irrigation scheduling. Enlist different approaches of irrigation scheduling and explain the critical growth stage approach.
- ~~Q.5~~ Classify soil water and describe capillary water.
- Q.6 Define Evapotranspiration of water and state the factors influencing evapotranspiration.
- Q.7 Enlist the soil moisture constants. Explain Field capacity and Moisture equivalent.
- Q.8 Write short notes on (Any Two):
- a) Permanent Wilting Point      b) Water Use Efficiency      c) SPAC relationship
- ~~Q.9~~ a) Explain moisture extraction pattern of crop with diagram.  
b) Define Drainage. Describe the causes of waterlogging.
- Q.10 Define Water requirement. Enlist the methods of estimation of water requirements and explain transpiration ratio method.

**SECTION 'B'**

Q.11 Define the following terms:

- |                                 |                           |
|---------------------------------|---------------------------|
| 1) Potential evapotranspiration | 2) Irrigation requirement |
| 3) Net irrigation requirement   | 4) Effective rainfall     |

Q.12 Fill in the blanks:

- 1) \_\_\_\_\_ is synonymous to the evapotranspiration.
- 2) \_\_\_\_\_ irrigation is effectively used on slopy land.
- 3) One cubic meter of water is equal to \_\_\_\_\_ liter.
- 4) Moisture held at  $\frac{1}{3}$ <sup>rd</sup> bar, is called as \_\_\_\_\_.

