

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END THEORY EXAMINATION

B.Sc.(Hons.) Horticulture

Semester	: IV (New)	Term	: Second	Academic Year	: 2023-24
Course No.	: H/VS 244	Title	: Precision Farming and Protected Cultivation		
Credits	: 3 (2+1)				
Day & Date	: Friday, 03.05.2024	Time	: 9:00 to 12:00 hrs.	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 diagram wherever necessary.

SECTION 'A'

- Q.1 What is Precision Farming? Write in detail its importance and scope.
- Q.2 Explain in brief cultivation of Tomato under greenhouse on the following points:
- a) Types of cultivar
 - b) Bed preparation
 - c) Fertigation
 - d) Harvesting and Yield
- Q.3 What is the importance and scope of Greenhouse technology? Enlist different types of greenhouses.
- Q.4 How are various techniques and applications being applied in precision farming for crop protection? Explain in detail SSNM.
- Q.5 Write short notes on (Any Two):
- a) Laser leveling
 - b) Soil mapping
 - c) Characteristics of growing media
- Q.6 What is Shadenet house cultivation? Explain its uses and advantages over traditional greenhouse.
- Q.7 Write in detail cultivation of Cucumber under naturally ventilated polyhouse on the following points:
- a) Varieties
 - b) Training and Pruning
 - c) Mulching
 - d) Yield
- Q.8 Enlist cooling system of greenhouse and explain in detail fan and pad cooling system.
- Q.9 Write in detail constraints in adoption of Polyhouse technology.
- Q.10 What is Nutrient Film Technique? Explain in detail its advantages.

(P.T.O.)

SECTION 'B

Q.11 State True or False:

- 1) WeedCast software predicts the time of emergence of weeds and speed of their growth after emergence.
- 2) Yield maps represent the output of crop production.
- 3) The shadenet is always placed at the base of greenhouse to reduce light.
- 4) Sand filters are used to remove all inorganic material suspended in irrigation water.
- 5) Continuous irrigation to soil through drip or mist irrigation or water spray inside the polyhouse has also led to poor drainage conditions.
- 6) GIS is an important component of precision farming.
- 7) NFT can be used successfully in soil media.
- 8) Global Positioning System is a referencing device capable of identifying sites within a field.

Q.12 Fill in the blanks:

- 1) Light intensity in the greenhouse is measured with the help of _____.
- 2) _____ is the practice of growing plants in an air or mist environment without the use of any substrate.
- 3) _____ involves locating, identifying and grouping the different kinds of soil.
- 4) _____ is the loss of water-soluble plant nutrients from the soil, due to rain and irrigation.
- 5) _____ is the killing of all living organisms from growing media.
- 6) The science of making inferences about an object from distant measurements without physical contact is known as _____.
- 7) The slope along the gutter on the polyhouse should not be more than _____.
- 8) _____ energy is used in greenhouse drying.

