

Roll No.

DD-466

M. Sc. (Second Semester) EXAMINATION, May/June, 2020

BOTANY

Paper Third

(Plant Physiology)

Time : Three Hours

Maximum Marks : 80

Note : Attempt all questions. All questions carry equal marks.

1. Write short notes on any *two* of the following :
 - (a) Active solute transport
 - (b) Secondary Acquired Resistance (SAR)
 - (c) Michaelis Menten's equation and its significance
 - (d) Phospholipid signalling

Unit—I

2. Write a note on root microbe interaction in facilitating nutrient uptake.

Or

Write short notes on any *two* of the following :

- (a) Importance of osmosis in plants
- (b) Root pressure theory of water transport

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- (c) Any *two* experiments showing translocation of salts in the phloem.

Unit—II

3. Discuss specific signalling *two* component sensory system in bacteria.

Or

Write short notes on any *two* of the following :

- (a) Carrier proteins
- (b) Protein kinases
- (c) Calcium calmodulin cascade

Unit—III

4. What is Stress ? Give a brief account of water and salt stress in plants.

Or

Write short notes on any *two* of the following :

- (a) Frost injury in plants
- (b) Hypersensitive response (HR)
- (c) Heat resistance in plants

Unit—IV

5. Give a brief account of phytochrome and its biochemical properties.

Or

Write short notes on any *two* of the following :

- (a) Isoenzymes
- (b) Cryptochrome
- (c) Allosteric mechanism of enzymes