

# DD-799

**M. Sc. (Fourth Semester)**

**EXAMINATION, 2020**

MICROBIOLOGY

Paper Fourth (A)

**(Agricultural Microbiology)**

*Time : Three Hours*

*Maximum Marks : 80*

**Note :** Attempt all the *five* question. All questions carry equal marks.

1. Write short notes on the following :
  - (a) Rhizobium
  - (b) Bacillus
  - (c) Carbon cycle
  - (d) Leaf Curl of Papaya
2. Give a detailed account of Phosphate solubilization and mobilization.

*Or*

Write short notes on the following :

- (a) Structure and characteristics of Glomus
- (b) Nostoc and Anabaena

3. Give a detailed note on **ecto** and **endo** micorrhizae and write about their agricultural importance.

*Or*

Write short notes on the following :

- (a) Symbiotic biological nitrogen fixers
- (b) *Azotobacter* and *Asosprillum*

4. What are biopesticides ? Discuss their types and applications.

*Or*

Write short notes on the following :

- (a) Nitrogen cycle
- (b) *Pseudomonas syringae*

5. Discuss the symptoms, causal organism and control measures of Tobacco Mosaic and Red Rot of sugarcane.

*Or*

Write short notes on the following :

- (a) Citrus canker
- (b) Yellow vein mosaic of Bhindi