

**Roll No.**

**Total No. of Pages : 02**

**Total No. of Questions : 09**

**B.Sc. Agriculture (Sem.-7)**

## BIOCONTROL AND INTEGRATED DISEASE MANAGEMENT

**Subject Code : BSAG-PP-704**

**M.Code : 74866**

**Time : 3 Hrs.**

**Max. Marks : 60**

### INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

## SECTION-A

**Q1. Differentiate between :**

- Oligogenic and Polygenic resistance
- Antagonist and Mycoparasite
- Soil sterilization and Soil solarization
- Disease tolerance and disease escape
- Mutualism and Parasitism
- Commensalism and Proto-cooperation
- Resident antagonist and Introduced antagonist
- Formulation and mass culturing of bio-agent
- Seedling resistance and adult plant resistance
- Active ingredient and auxiliary material

## SECTION-B

- Q2 What is the need for biological control of plant pathogens? Describe limitation of bio-control.
- Q3 Differentiate between horizontal and vertical resistance.
- Q4 What are systemic fungicides? What are their advantages over non-systemic fungicides?
- Q5 Write a short note on role of antifungal antibiotics in disease control. What are their limitations?
- Q6 Describe fungicide resistance in plant pathogens and how does it emerge?

## SECTION-C

- Q7 What characters should an ideal bio-control agent have for controlling plant diseases? What are the constraints in their use? Write mode of action of bio-control agents? Explain hyper parasitism citing examples. Give four examples of commercially available fungal and bacterial bio-control agents' along with their trade name.
- Q8 How resistant variety is developed and from which sources host resistance can be obtained? What are the causes of failure of resistance and what measures should be taken in order to increase the life span of resistant varieties?
- Q9 a) How you will differentiate between apoplastic and symplastic translocation of fungicides? Describe typical pathway of apoplastic translocation.
- b) Which fungicides carry high resistance risk? Discuss mechanism of fungicide resistance and its management.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**