

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- JUNE-2024

M.Sc -4th Sem (Microbiology)

COURSE CODE(CREDITS):21MS1MB412

MAX. MARKS: 35

COURSE NAME: Plant & Agricultural Microbiology

COURSE INSTRUCTORS: Dr Hemant Sood

MAX. TIME: 2 Hours

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1. How do plants respond to pathogen attacks? Explain by citing any mechanism for the same by mediating phytochemical-induced reactions. Do you think any mechanism exists in plants against herbivory? If yes, how is it demonstrated in the plant system? (7)

Q2. What are the general principles of plant disease management and how those are implemented? How are integrative management techniques used for crop improvement programs? Explain by citing an example. (7)

Q3. How would you like to use fungicides for treating diseases that occur on different parts of the plants? Which formulations you would be using and how you are applying to the plants? How are chemical methods helping in the supplementation of these fungicides for the eradication of the diseases? (7)

Q4. Which micro-biotechnological interventions are required in the production of medicinal compounds from plants? Conceptualize a methodology for the production and utilization of any one of the products for human usage. (7)

Q5. Explain the following:

- a. How do vertical and horizontal resistance work for providing defense?
- b. How plant quarantine measures are carried out?
- c. How do variables affect the severity and incidence of disease in crops? (7)