

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- April-2024

M.Sc -4th Sem (Microbiology)

COURSE CODE(CREDITS):21MS1MB412(3)

MAX. MARKS: 25

COURSE NAME: Plant &Agricultural Microbiology

COURSE INSTRUCTORS: Dr Hemant Sood

MAX. TIME: 1Hr30 min.

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

Q1. Why ethical obligations are required for the development of genetically modified crops? Which types of mandates are required to be followed for the safe release of GM crops at national and international levels? Explain with examples. (5)

Q2. (a). Develop a methodology for the development of biofertilizer which could be effectively utilized for the wide variety of plants. Explain the appropriate method for its applications. (3.5)

(b) Why do we need different types of biofertilizers? Explain with examples and also mention the constraints associated with the production of the same. (2.5)

Q3. Which biotechnological interventions will be utilized for the production of virus-resistant tomato crops? Explain the methodology you would like to follow and which mechanism of action would be most suitable for the same. (5)

Q4. Do you agree that Integrated Pest Management (IPM) is the most effective system for controlling disease infections in crops? What are the components of this IPM program? Which cultural practices are very effective in crop disease management? (2+2+2)

Q5. What are the different modes of action of fungicides for managing fungal infection in crop plants? How do systemic fungicides control infections explain with examples. (3)