

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-2 EXAMINATIONS-2023

M. Sc. I Semester (MICROBIOLOGY)

COURSE CODE (CREDITS): 21MS1MB113 (2)

MAX. MARKS: 25

COURSE NAME: FUNGAL BIOLOGY

COURSE INSTRUCTOR: DR. JATA SHANKAR MAX. TIME: 1 Hour and 30 minutes

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

- Q1. Zygomycota features some of the important/common fungal species for human health or agricultural crops. Describe the common features of zygomycota and draw a well labelled life cycle of Mucor? [3 marks] COII
- Q2. Illustrate the genome size and estimated number of genes of a model fungal organism such as *Saccharomyces cerevisiae*? [3 marks] COI
- Q3. Mucormycosis is caused by few fungal species. Name two species that cause mucormycosis and their genome size and estimated number of genes in the genomes? [3 marks] COII
- Q4. What is PAMP triggered immunity (PTI) ? How Teliospores infect dicot species to cause smut fungi considerably that lead to the loss of several important crops? [3 marks] COII
- Q5. What is role of mannitol in the development of fruiting body in mushroom from mycelia structures, and also illustrate the life cycle of mushroom? [3 marks] COII
- Q6. Notes on the following (2.5 marks each) CO I & II
- Compare the cell wall component of mycelia/hyphae with that of conidia/conidium
 - Name of medical mushroom and bioactive compounds helpful in cancer therapy?
 - PAMP
 - PRR