

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-1 EXAMINATIONS-2023

M. Sc. I Semester (MICROBIOLOGY)

COURSE CODE (CREDITS): 21MS1MB113 (2)

MAX. MARKS: 15

COURSE NAME: FUNGAL BIOLOGY

COURSE INSTRUCTOR: DR. JATA SHANKAR

MAX. TIME: 1 Hour

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

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Q1. What are the key applications of fungal systems in industries, pharmaceuticals, and nutraceuticals? Could you provide relevant examples to illustrate these applications? [3 marks]

COI

Q2. Provide a detailed textual description of the life cycle of yeast cells (*Saccharomyces cerevisiae*) along with labels for each stage. Additionally, explain the concept of generation time for yeast cells and its typical range under optimal growth conditions. [3 marks] COI

Q3. What are the primary methods and criteria used in the classification of fungi? Please provide an overview of the major taxonomic groups and how fungi are categorized based on characteristics such as morphology, reproductive strategies, and genetic analysis. [3 marks] COI

Q4. What is appressorium, and how does it help to establish the infection in host tissue? Small brown flecks on the skins of ripe bananas are often observed, Name the fungi and the role of melanin on the fungal cell wall. [3 marks] COI

Q5. Provide a detailed explanation of tempeh. Describe its production process, key nutritional components, and its significance as a fermented food product. Additionally, highlight any potential health benefits associated with its consumption. [3 marks] COII