PG (CBCS) EVEN SEMESTER EXAMINATION, 2023

LIFE SCIENCE & BIOINFORMATICS

4th Semester

Course No. : LSCC - 401(B)

(Mycology and Plant Pathology)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

(Answer all questions)

1. Discuss the molecular tools used in correct identification of fungal genus and species. [14]

OR

2. What are the important features of different fungal lineages? Discuss them in relation to their current phylogenetic relationships. [14]

3. Illustrate the economic importance of the Kingdom 'Fungi' for the production of -

   (a) Antimicrobials [7]

   (b) Plant biomass degrading enzymes [7]

OR

4. Write notes on the following: [2x7=14]

   (a) Mycorrhizal associations and their applications in agriculture

(Turn Over)

   (b) Lichens and their uses

5. Write an elaborate note on the chemical methods of plant disease control. Discuss the adverse effects of chemical applications on crop plants for controlling pathogens. [12+2=14]

OR

6. Write notes on the following: [2x7=14]

   (a) Bordeaux mixture

   (b) Antagonism

7. Give a comprehensive account of various plant defense strategies against pathogens. Discuss the ROS signaling in plants in response to pathogen attack. [10+4=14]

OR

8. Write notes on the following: [2x7=14]

   (a) Pathogenicity and parasitism interrelationship

   (b) Molecular regulation of host-pathogen interaction

9. Write an elaborate account on the biotechnological tools used in the development of disease resistant varieties of plants. [14]

OR

10. Write notes on the following: [5+4+5=14]

   (a) Plant quarantine

   (b) Crop rotation

   (c) Gene gun

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