

**C053**

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## **BOT-501**

**Biology and Diversity of Viruses, Bacteria and Fungi**

M.Sc. BOTANY (MSCBOT)

Ist Year Examination, 2022 (June)

**Time : 2 Hours]**

**Max. Marks : 80**

**Note :** This paper is of Eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

### **SECTION–A**

**(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

(2×20=40)

1. Write a detailed note on the isolation and purification of viruses.

2. Describe the ultra structure of bacteria in detail.
3. Briefly describe the following :
  - (a) Mycoplasma.
  - (b) Role of fungi in organic acid production.
4. How does sexual reproduction take place in Ascomycotina? Discuss the formation of ascus in detail.
5. Discuss the life cycle of *Rhizopus stolonifer* in detail with the help of suitable diagram.

### **SECTION-B**

#### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)

1. Write short note on the following :
  - (a) Archaeobacteria.
  - (b) Heterothallism.
2. Write the difference between :
  - (a) Generalized transduction and specialized transduction.
  - (b) Bacteria and Viruses.

3. Discuss the modes of transmission of plant viruses.
  4. Discuss about Fungi as single cell protein.
  5. Write a note on the following :
    - (a) *Aspergillus*.
    - (b) *Agaricus*.
  6. What do you understand by heterokaryosis? Describe the way of formation of heterokaryotic mycellium.
  7. Write a short note on zoospores in fungi.
  8. Give the classification of class "fungi imperfecti".
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