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# **MBOT-501**

### Biology and Diversity of Viruses and Bacteria

M.Sc. Botany (MSCB0T)-20

1st Semester Examination, 2022 (Dec.)

Time: 2 Hours] [Max. Marks: 35

**Note:** This paper is of Thirty Five (35) 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 Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.

 $(2 \times 9\frac{1}{2} = 19)$ 

1. Discuss the various methods of purification of viruses.

- **2.** Describe the ultrastructure of bacteria with the help of well labelled diagram.
- **3.** Write a detailed note on nutrition in bacteria.
- **4.** What do you understand by mycoplasma? Discuss the characteristic features of mycoplasma.
- **5.** What do you understand by bacteriophage? Discuss the methods of replication in them.

#### SECTION-B

### (Short Answer Type Questions)

**Note:** Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only. (4×4=16)

- 1. Discuss the classification of viruses given by ICTV.
- **2.** Write a brief note on archaebacteria.
- 3. Describe the role of bacteria in medicine.
- **4.** Discuss the asexual mode of reproduction in bacteria.
- **5.** Write a short note on Biofertilizers.

- **6.** Difference between prokaryotic and eukaryotic cell.
- **7.** What do you understand by plasmids?
- **8.** Which microorganism is considered as a connective link between living and non-living organisms? Justify your answer with appropriate supports.