

**P-218**

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Roll No. ....

## **MSCZO-604**

### **Microbiology and Immunology**

M.Sc Zoology (MSCZO)

3rd Semester Examination, 2023 (June)

**Time : 2 Hours]**

**Max. Marks : 70**

**Note :** This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

### **SECTION–A**

#### **(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

- 1.** Explain the micro-organisms which maintain the soil fertility and how ?

2. Describe the antibiotics along with various classes of antibiotics and their mode of action.
3. Write an essay on history and importance of microbiology.
4. What is autoimmunity ? How does it occur ? Explain it with suitable examples.
5. Describe graft rejection alongwith its mechanism with suitable diagram.

## **SECTION-B**

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

**Note :** Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

1. Describe symbiotic relationship with special reference to nitrogen fixation.
2. Describe the role of microbes in fermentation technology.
3. Explain various methods of sterilization and its importance.
4. Discuss any two water borne diseases.

5. Write about the role of Lymphocytes in immune response.
  6. Explain the mechanism of T-cells mediated cytotoxicity.
  7. Define anaphylaxis and discuss the mechanism and symptoms of anaphylaxis.
  8. Explain hybridoma technology for monoclonal antibody production.
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