# K-557

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# **ZO-551**

#### **IMMUNOLOGY**

M.Sc. Zoology (MSCZO)

2nd Year Examination, 2023 (Dec.)

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 answers 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.

 $(2 \times 19 = 38)$ 

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- 1. Explain the mechanism of T-cell mediated Cytotoxicity.
- **2.** Give an account on origin of immune cells from bone marrow with a suitable diagram.
- **3.** Explain various mechanisms involved in the regulation of immune response.
- **4.** Write in detail on innate and acquired immunity.
- **5.** What is autoimmunity? How it occurs? Classify the autoimmune disease.

### 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. Explain the principle of ELISA & how it useful in diagnosing HIV?
- **2.** Write a short note on hybridoma Technology.
- **3.** What is the transplantation antigens and briefly discusses their role in graft rejection.

- **4.** Discuss different B-cell deficiency disease.
- **5.** What is the NK cells and what is their role in CMI?
- **6.** Explain the factors influencing antibody production.
- 7. Explain the antigens and haptens.
- **8.** Write notes on:
  - (a) MHC.
  - (b) Lymphoid organ.