A-0117

Total Pages : 3 **Roll No. .....**

MZO–607

M.Sc. ZOOLOGY (MSCZO)

(Immunology-II, Immunotechnology)

4th Semester Examination, Session December 2024

Time : 2:00 Hrs. 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. ***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 2×9½=19

***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.

1. Describe the types of hypersensitivity reactions. Include each type's immunological mechanisms, examples, and clinical manifestations.

2. Describe the innate immune response to an infection. How does the body's first line of defence, including physical barriers and innate immune cells, work to prevent the entry and spread of pathogens ?

3. What is herd immunity, and why is it important in controlling infectious diseases ? How does vaccination contribute to achieving herd immunity ?

4. Explain the principle of immunization and the role of vaccines in disease prevention. How do vaccines stimulate both humoral and cellular immunity ?

5. Explain the role of genetic and environmental factors in developing autoimmune diseases. How do these factors contribute to disease susceptibility and pathogenesis ?

Section–B

Short Answer Type Questions 4×4=16

***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.

1. How do rapid antigen tests work ?
2. What are monoclonal antibodies, and how are they used in cancer therapy ?
3. How is immunosuppressive therapy used in organ transplantation ?
4. What are adjuvants, and why are they used in vaccines ?
5. What is pathogen-associated molecular patterns (PAMPs) ?
6. What is molecular mimicry in autoimmunity ?
7. What is the role of mast cells in allergic reactions ?
8. What is the role of macrophages in immune defence ?

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