

ZOO-602: IMMUNOLOGY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY

NB: All questions are compulsory.

Illustrate your answers with neat diagrams wherever necessary

1. Describe: 14
a) Cells involved in Immune responses.
b) Hypersensitivity reactions

OR

1. Briefly explain the various types of Immunodeficiencies.
2. Write detailed notes on: 14
a) Ultrastructure of Mitochondria.
b) Protein configuration and SCOP classification.

OR

2. Explain the methods, applications and limitations of gene cloning
3. Discuss: 14
a) Production of Monoclonal antibodies
b) Real time PCR.

OR

3. Give an in depth account of the advances in Gene sequencing techniques.
4. Write notes on 14
a) In-vivo gene therapy
b) Biosensors

OR

4. Describe Biotechnological innovations for bioremediation or pollution control.
5. Write short notes on any **THREE** of the following: 14
a) Immunoglobulins
b) Sequencing of amino acids
c) Human Genome Project and beyond.
d) Transgenic animals for medical applications.
e) DNA fingerprinting.