M.Sc.- II semester - ZOOLOGY
Paper-I
ATKT(Regular/Private)

Paper-I General and comparative animal physiology and endocrinology

NOTE- all questions are compulsory
Word limit - 150 words

Q.1 Explain respiratory pigments in different phylogenetic group?
Q.2 Explain thermo regulation in Homeotherms?
Q.3 what is phonoreception? Explain in various invertebrates?
Q.4 Explain chemistry of bioluminescence?
Q.5 Describe physiology of pancreas?
M.Sc. (Second semester) Zoology
(Regular/Private/ATKT)

Paper IV Molecular Cell biology and Genetics

All questions are of equal marks

Que. 1- Describe transport across cell membrane.

Que. 2- What is cell surface receptors. Write their role in cell signaling.

Que. 3- Explain chromosomal organization of genes and non-coding DNA

Que. 4- Describe the concept of dosage compensation.

Que. 5- Write short notes on-
   (i) Human gene therapy
   (ii) Transgenic animals and their application.
MSc 2\textsuperscript{nd} sem (Zoology)

\textbf{PAPER-II} Population Ecology and environmental physiology

Q.1 What is population? Write their characteristics?

Q.2 Explain given below:-
   i) Eco physiological adaptation to marine environments.
   ii) Levels of adaptation.

Q.3 what is environmental limiting factors?

Q.4 Describe the conservation management of natural resources?

Q.5 What is homeostasis? Explain endothermi mechanism of regulation of body temperature?
All questions are of equal marks

Q.1 Explain principle of Light microscope and phase contrast microscope.

Q.2 Give details of different type of Chromatography

Q.3 Write short notes on
   A. Autoradiography       B. Immunodiffusion

Q.4 Describe process of Tissue fixation and staining.

Q.5 Describe different types of blotting and PCR