201ZO24

ASSIGNMENT - 1
M.Sc. DEGREE EXAMINATIONS, DECEMBER -2025

Second Semester

Zoology

Paper – I – GENETICS AND EVOLUTION

MAXIMUM MARKS: 30
ANSWER ALL QUESTIONS

1. Write in detail the Sex linkage inheritance.
2. Describe the behavioral genetics in Drosophila
3. Explain in detail the Chromosomal abnormalities.
4. Define the pedigree analysis and discuss the quantitative and qualitative traits of human beings.
5. Write a brief account on Darwinism with suitable examples.

201ZO24

ASSIGNMENT - 2
M.Sc. DEGREE EXAMINATIONS, DECEMBER -2025

Second Semester

Zoology

Paper – I – GENETICS AND EVOLUTION

MAXIMUM MARKS: 30
ANSWER ALL QUESTIONS

1. Describe the Hrdy Weinberg law of equilibrium.
2. Discuss the biological concepts of species.
3. Write in detail the pattern and mechanisms of reproductive isolation.
4. Give an account on divergent evolution.
5. Describe the adaptive radiation in reptiles.

202ZO24

ASSIGNMENT - 1
M.Sc. DEGREE EXAMINATIONS, DECEMBER -2025

Second Semester

Zoology

PAPER-II COMPARATIVE ANIMAL PHYSIOLOGY

MAXIMUM MARKS: 30
ANSWER ALL QUESTIONS

1. Discuss about major bioenergetic processes.
2. Write a note on
    a) nutrition impairment
    b) enzyme activity
3. Explain about the process of digestion and absorption.
4. Explain about comparative account of circulatory system in animals.
5. Describe the Thermoregulation in poikilotherms and homeotherms.

202ZO24

ASSIGNMENT - 2
M.Sc. DEGREE EXAMINATIONS, DECEMBER -2025

Second Semester

Zoology

PAPER-II COMPARATIVE ANIMAL PHYSIOLOGY

MAXIMUM MARKS: 30
ANSWER ALL QUESTIONS

1. Explain about propagation of nerve impulse and synaptic transmission in animals.
2. Explain about Regeneration, moulting and metamorphosis.
3. Describe the Hormonal regulation in reproduction.
4. Explain about Chromatophores and Significance of chromatophores and color change in animals.
5. Write a detail note about Bioluminescence.

203ZO24

ASSIGNMENT - 1
M.Sc. DEGREE EXAMINATIONS, DECEMBER -2025

Second Semester

Zoology

Paper III: Principles of Ecology

MAXIMUM MARKS: 30
ANSWER ALL QUESTIONS

1. Give an account on Ecosystem structure and Function
2. Explain in detail the classification of ecosystem with suitable examples.
3. Give an account on energy flow and ecological pyramids in trophic ecosystem.
4. Explain in detail the Shelford's law of tolerance.
5. Discuss the Population Characteristics.

203ZO24

ASSIGNMENT - 2
M.Sc. DEGREE EXAMINATIONS, DECEMBER -2025

Second Semester

Zoology

Paper III: Principles of Ecology

MAXIMUM MARKS: 30
ANSWER ALL QUESTIONS

1. Write an account on stochastic and time long models of population growth.
2. Write in detail the nature of communities, structure and attributes.
3. Describe the Extrinsic and Intrinsic mechanism of population regulation.
4. Write in detail the biological monitoring programme.
5. Discuss the concept of Productivity.

204ZO24

ASSIGNMENT - 1
M.Sc. DEGREE EXAMINATIONS, DECEMBER -2025

Second Semester

Zoology

Paper – IV - TOOLS AND TECHNIQUES IN BIOLOGY

MAXIMUM MARKS: 30
ANSWER ALL QUESTIONS

1. Describe the principle and working conditions and applications of Fluorescence Microscopy.

2. Write short notes on;

   (i) Principle of optical microscopy

   (ii) Fixation and staining techniques

3. Explain about principle, and instrumentation of Atomic Absorption spectroscopy.

4. Write short notes on;

   (i) Instrumentation of Electron Spin Resonance (ESR) spectroscopy

   (ii) Working principle of X-Ray Crystallography.

5. Discuss the principle, and applications of Gel-filtration Chromatography.

204ZO24

ASSIGNMENT - 2
M.Sc. DEGREE EXAMINATIONS, DECEMBER -2025

Second Semester

Zoology

Paper – IV - TOOLS AND TECHNIQUES IN BIOLOGY

MAXIMUM MARKS: 30
ANSWER ALL QUESTIONS

1. Write short notes on;

   (i) Gas Liquid Chromatography

   (ii) Electrophoresis

2. Write in detail on Polymerase Chain Reaction and its uses.

3. Write short notes on;

   (i) Northern Blotting Technique

   (ii) Types of Sequences used in bioinformatics

4. What are the different types of Tests of significance, and write in detail on Chi-square X^2 test

5. Write short notes on;

   (i) Standard Error

   (ii) Binomial distributions