DEPARTMENT OF ZOOLOGY
MIRZA GHALIB COLLEGE, GAYA
U.G. (Zoology)

Program Objectives:

Zoology is one of the subject and discipline that provide a comprehensive understanding of all living systems and their relationship with the ecosystem and environment. It imparts and assessesthe quality of critical thinking, analytical and scientific reasoning as well as problem-solving capacity of living system. Our undergraduate program in Zoology is designed to prepare students to have. Students of UG Programmes of Zoology at the time of graduation will be able to understand:

PO1.**Critical Thinking**: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO2.**Effective Communication**: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

PO3. **Social Interaction**: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO4. **Effective Citizenship**: Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO5. **Ethics**: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO6. **Environment and Sustainability**: Understand the issues of environmental contexts and sustainable development.

PO7. **Self-directed and Life-long Learning**: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Program Specific Outcomes:

PSO1 Help students to understand life-environment interaction.

PSO2 Analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment

PSO3 Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms.

PSO4 Help students to understand the complex evolutionary processes and behaviour of animals

PSO5 Correlates the physiological processes of animals and relationship of organ systems

PSO6 Understanding of environmental conservation processes and its importance, pollution control and biodiversity and protection of endangered species

PSO7 Gain knowledge of Agro based Small Scale industries like sericulture, fish farming, lac culture etc.

PSO8 Understand various concepts of genetics and its importance in human health

PSO9 Apply the knowledge and understanding of Zoology to one's own life and work

PSO10 Develops empathy and love towards the animals

PSO11 To perform laboratory procedures

Course Outcomes:

PAPER - I

Animal Diversity – Lower Non-Chordata

CO1 Describe general taxonomic rules on animal classification.
CO2 Understand the diversity and classification of lower non-chordates (invertebrates).
CO3 To study structure and functional aspects of some Protozoa, Porifera, Cnidaria, Ctenophora.
CO4 Structural and functional aspects of some Platyhelminthes, Aschelminthes.
CO5 Structural and functional aspects of some Annelids, Arthropods, Molluscs.
CO6 To study the habits, morphology, physiology, reproduction and development some type animals fromannelida to echinodermata

PAPER - II

Ecology, Animal Behaviour and Biometry

CO1 To understand the ecosystem structure, functions, processes and adaptation
CO2 To understand the concept of wildlife and their conservation
CO3 To understand environmental pollution, pollutants and their control measures
CO4 To understand Animal behaviour and response of animals to different instincts
CO5 To understand how the rhythmic geophysical environment impacts the internal rhythms,
CO6 To understand environmental cues are perceived by the organisms and modulate the circadian physiology at molecular, cellular and systems levels
CO7 To understand scope and application of statistical methods in Biology

PAPER - III

Chordata

CO1 Origin and evolution of chordates
CO2 To understand the diversity and classification of chordates
CO3 To study the habits, morphology, physiology and reproduction some type Chordates
CO4 To study comparative anatomy of various vertebrate systems

PAPER - IV

Comparative Anatomy

CO1 To study comparative anatomy of various vertebrate systems
CO2 To study evolution and fate of kidney, urinogenital ducts, gonads and Chonda-Splanchno & Osteocranium.

Embryology.

CO1 To understand fertilization
CO2 To understand development of some type of Chordates Animals.
CO3 To study organogenesis of Heart, Barain and Eye.

PAPER - V

Biochemistry, Physiology and Endocrinology.

CO1 To understand the basic biochemical building blocks and their metabolism
CO2 Physiological and biochemical understanding into the nature of mechanical, physical, and biochemical functions of organs and the cells of which they are composed
CO3 Interactions and interdependence of physiological and biochemical processes
CO4 To understand Bio-chemical and physiological actions of Harmones

PAPER - VI

Cell Biology, Genetics and Economic Zoology

CO1 Structural and functional aspects of basic unit of life and cell organelles.
CO2 Non mendelian inheritance.
CO3 Concept of gene mutations- various causes.
CO4 To study the structure and organization of DNA.
CO5 Conversion of genetic information into proteins.
CO6 Culture of lac, silk, honey, fishes.
CO7 Elementary idea of common pests.
CO8 Vectors of infectious dieses.

PAPER - VII

Evolution, Zoogeography and Paleozoology.

CO1 Theories of Evolution.
CO2 Evolution of species and their evolutionary processes.
CO3 Zoogeographical realms of the world.
CO4 Characteristic and peculiar fauna of different regions.
CO5 Faunistic Peculiarities of different eras.
CO6 Fossils – mode of formation and age determination.