

**Department of Wildlife Sciences
Faculty of Life Sciences
AMU Aligarh**

Syllabus for Admission to Ph.D Programme · 2022-2023 onwards

SECTION B

Origin and evolution of life, Classification of plants, mammals, birds, reptiles and amphibians. Status and distribution of mammalian, avian, reptiles and amphibians. Bio geographic classification of the world and India. Morphological adaptations in birds, mammals, reptiles and amphibians. Movements and migration, mode of communications, foraging and food habits, food selection, reproduction and parental care among birds and mammals, Sexual dimorphism and sex determination in birds, mammals, reptiles and amphibians.

Basic concepts and structure of ecosystem and biological communities. Physical structure of a community; vertical stratification, horizontal heterogeneity, edge and ecotone Biological attributes of a community; species richness, diversity and dominance. Change in community structure and function; temporal changes, colonization and extinction (theory of Island biogeography). Concepts, characteristics and mechanism of succession. Concept of niche, niche parameters and factors affecting it. Effects of inter and intra specific competition.

Population, its attributes and their analysis. Population regulation predation prey models, concept of carrying capacity, theories of population dispersal, concept of minimum viable population, population vulnerability analysis and its component.

National and International policies and legislation for wildlife and biodiversity protection and conservation. Wildlife trade and its impact on population and ecosystems. Role of Governmental and NGOs in conservation and management of wildlife and biodiversity.