

M.Sc II Semester 2019-20
Value Added Course
CONSERVATION BIOLOGY

32 hrs

CO1	Gain knowledge of biodiversity components and species concepts, and biodiversity hotspots.
CO2	Understand the status of animal diversity, extinction rates, threats, and conservation tools
CO3	Explore animal laws and policies in India, including the Wildlife Protection Act, and learn about the economics of biodiversity conservation
CO4	Develop skills in conservation education and awareness and understanding the roles of NGOs and government organizations.

Unit I	Biodiversity; species concepts; animal diversity: Components of Biodiversity (Ecosystem, Genetic and Species diversity) - Assigning values to biodiversity - Species concepts - inventory survey methods in Animal diversity - Biodiversity Hotspots (Western Ghats, Indo - Burma region).	08 hrs
Unit II	Loss of animal diversity, status of species: Extinctions: Past rates of Extinctions - Threats to animal diversity in India - Status of species: Rare, endemic and threatened species - Measuring status of species in the wild - IUCN Red list exercise - Status of Indian animals. Conservation: tools in animal conservation: In situ and Ex situ conservation of Indian animals (Case studies) - Project Tiger and Elephant - Captive breeding program - Peoples participation in conservation - Tools in Conservation: GIS, Remote sensing – PVA - vortex.	08 hrs
Unit III	Animal laws and policies in India; Economics of biodiversity conservation: Wildlife (Protection) Act of India (1972) - Protected Area Network - Zoo policy - Laws and their applications in Zoological parks, Wildlife sanctuaries and Biosphere reserves - Economics of biodiversity conservation.	08 hrs
Unit IV	Conservation education and awareness: Wildlife / Animal magazines, Journals - How to write popular and Scientific articles – Public Presentation - Designing educational resource materials – wildlife, nature, environmental games - Role of NGO's and Government organizations in wildlife conservation - Wildlife documentation.	08 hrs

References:

1. R. B. Primack 1993. Essentials of Conservation Biology, Sinauer Associates, USA
2. G. K. Meffe and C. R. Carroll 1994. Principles of Conservation Biology, Sinauer Associates, USA

3. B. Groom bridge 1992. Global Biodiversity. Status of the Earth's Living Resources. Chapman and Hall, London. M.Sc. Zoology-16-17 onwards -revised-UD Annexure No:52 A Page 28 of 40 SCAA Dated: 03.07.2017

4. R. A. Mittermeier, N. Meyers, P.R. Gil and C. G. Mittermeier 2000. Hotspots: Earth's

5. T. W. Clark, R. P. Reading and A.L. Clarke 1994. Endangered Species Recovery: Finding the Lessons, Improving the process. Island Press, Washington, DC.