

Highlighted portions are deleted from  
2017 Syllabus.

III SEMESTER		
NME	WILDLIFE MANAGEMENT	15PZON31A
Hrs / Week : 6	Hrs / Sem : 90 Hrs/ Unit : 18	Credits: 5

**Objective:** This paper examines the various principles of conservation and management of wildlife stating the various concepts of ecology and population and various methods such as telemetry and remote sensing that are used to maintain and manage a wildlife conservation sanctuary. It creates awareness among the student community about the importance of conserving and protecting biodiversity.

#### UNIT – I WILDLIFE AND ECOLOGY

Ecological concepts related to nature and natural resources: Ecosphere and Biosphere – fundamental ecological variables – biodiversity – ecological principles governing the use of natural resources: definition of a resource – renewable and non renewable resources – principles concerning diversity and populations – stability of population. Distribution of wildlife in India – organization and legislation – status of wildlife conservation in states and union territories – endangered fauna and flora – threatened species - rare species – vulnerable species – extinct species – red data book. Hotspots. Wildlife sanctuaries and National parks in India and around the world.

#### UNIT – II POPULATION ECOLOGY

Population dynamics – Population estimation – census – sampling indices – population manipulation and indices – transect – line transect – Emlet. transects – change in frequency estimators – clutch effort estimators – mark recapture estimators. Age and sex criteria with special reference to Indian wildlife – consideration of special and unique habitats – the place of songs in forest ecosystem – consideration of featured species – forage/ cover ratio as an integrating factor/ cover – forage areas and E/ K response to altered forage/ cover ratios.

#### UNIT – III THREATS

Biological diversity – threats to biological diversity – loss of biological diversity – vulnerability to extinction – habitat destruction, fragmentation and degradation – exotic species introductions – disease and over exploitation – ethical value of biological diversity – conservation at the population level – problems of small populations – population biology of endangered species – establishing, designing and

managing protected areas – working with people and restoring the environment – *ex situ* conservation strategies – establishing new populations – species and habitats legally protected.

#### UNIT – IV CONSERVATION AND MANAGEMENT

Concepts of conservation – need for conservation – factors for decline of wildlife – predation of wildlife in natural environment – conservation and management – guidelines for conservation and management of wildlife – fundamental principles of applied remote sensing – remote sensing application – radio telemetry as a wildlife research tool – application – radio transmitters and its application – planning a wildlife project – broad issues and general strategies – management plans. Silviculture for improved wildlife habitat – silviculture options to provide timber and wildlife – habitat prescription – wildlife response.

#### UNIT – V CONSERVATION AND MAN

Global perspective on the selection of natural resources – critical reserve area habitat. **Wildlife management principles:** ecological basis – hunting – refuges – predator control – artificial stocking – carrying capacity – habitat improvement – interspersion – territories. **Special projects for endangered species:** project tiger – the Gir lion sanctuary – crocodile breeding project. Exploitation of wildlife resources – man and biosphere – inter dependence of organisms – wildlife as a natural resource – wildlife values and their exploitation – man and wildlife survival – disease and wildlife survival. Conservation and human societies – international agreements – international funding.

#### REFERENCE BOOKS:

1. B. D. Sharma, High altitude wildlife of India, 1994, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
2. V. B. Saharia, Wildlife in India, Nataraj Publishers, 17 Rajpur Road, Dehradun – 248001.
3. Francois & Ramode, Ecology of natural resources, John Wiley & Sons,
4. R. B. Singh, Suresh Mishra, Environmental law in India, 1996, Concept Publishing Company, New Delhi.
5. Richard Teague, A manual of wildlife conservation, 1971, The Wildlife Society, Washington, D.C.
6. Richard B. Primack, Essentials of conservation biology, 2014, Sinauer Association Inc., Sunderland, Massachusetts, USA.
7. R. F. Dasmann, Environmental conservation, 1984, John Wiley & Sons, New York.