

SEMESTER-III (Pool-B)

COURSE NAME : APPLIED WILDLIFE

(CHOI-B47)

Number of Credit: - 02

Maximum marks: 50

UNIT-I

ECOLOGY AND ANIMAL BEHAVIOUR

- I. Types of forest in India, with special reference to Rajasthan, Ecological factors- (1) Climatic - rainfall, atmospheric humidity, wind, atmospheric gases, temperature and light (2) Physiographic/ topographic- altitude, effect of steepness and sunlight on vegetation and direction of slopes (3) Edaphic-Soil profile (4) Biotic- inter specific and intra specific interaction (mutualism, commensalism, competition predation, parasitism, cooperation)
- II. Plant conservation by Afforestation, Checking Overgrazing, prevent soil erosion, seed banks
- III. Concepts of sustainable development - Advantages and applications -Wind energy, Solar energy, Crop rotation, Efficient water fixtures, Green space, Sustainable forestry.
- IV. Animal behavior- Works of Konrad Lorenz, Niko Tinbergen and Karl Von Frish (Nobel prize winners,1973), Learned and inherent (Genetic) behavior
- V. Types of social organization specially in non-human primates- solitary, Monogamy, Harem forming, Multi male/Multi female. Benefits of living in social groups

UNIT II

WILDLIFE TOOLS AND TECHNIQUES

- I. Introduction to wildlife methods- Camera traps, Radio collars, Telemetry, Transmitters, and Drone
- II. Techniques used to record animal behavior- Sampling methods: Ad-libitum, Focal animal, All-occurrences and Scan sampling
- III. Methods to record Phenology of plants - budding flowering, falling of old leaves, time of new leaves
- IV. Basics of Remote sensing - Active and Passive Remote Sensing, applications of remote sensing in environment and wildlife monitoring

UNIT-III

ECOTOURISM AND CONFLICT WITH WILD ANIMALS

- I. Ecotourism – Principles; Least disturbance to animals, Build Cultural Awareness, educating locals and visitors , Design Low-Impact Eco Tours, generate Financial Benefits for Local People.

- II. Human - Wildlife Conflict- Types, prevention, conflict with elephants, leopards, tiger, sloth bear, their management and mitigation.
- III. Translocation, reintroduction of wild animals, advantages and disadvantages of Exotic plants and animals
- IV. Ex-situ and In-situ conservation of wildlife, Hard and Soft core release

UNIT -IV

WILDLIFE HEALTH AND CRIME

- I. Common viral and bacterial diseases of Indian wild animals namely- Reptiles, Birds and Mammals. Advantages and disadvantages of keeping wild animals in captivity, including zoo
- II. Health management practices of various animals in zoo and biological parks
- III. Introduction to Wildlife crime control bureau (WCB) Techniques to identify different parts and products of flora and fauna used in wildlife trade - visual/morphological; toxicology/chemicals; pathology; Serology; molecular biology/genetics

UNIT V

FIELD RESEARCH AND PRESENTATION

- I. Study of indirect evidences –Pugmark, Hair, Scat and Pallet, specially of Carnivores and Herbivores.
- II. Report writing- Introduction, review of literature, objectives, methods, result, discussion and conclusion
Visit to biological park and observe animals and diseases
- III. Give an oral presentation of topic of your choice using power point presentation (PPT)-
- IV. related to plants, animals, ecology and environment