

# Syllabus for Integrated PhD (2015-2016)

## Paper II- Methodology (Wildlife)

**Max. Marks 100**

**Time Allowed: 3 hours**

### **Unit-I Field Methods**

- 1.1. Sampling design and methods of data collection, Vegetation sampling methods for use in wildlife habitat evaluation
- 1.2. Methods of wildlife population estimation : Sample counts, Drive counts, Line transect method, Point counts, Pugmark census, Pellet group count and Counts of dens and burrows
- 1.3. Field kit and its usage: Cameras, binoculars and GPS
- 1.4. Recording basic field observations through field signs like foot prints, feeding signs and animal droppings

### **Unit-II Methods of Studying Behavior and Feeding**

- 2.1. Quantitative methods of sampling behavior: Ad libitum, Focal animal and Scan sampling
- 2.2. Time- activity budgets, Ethograms
- 2.3. Fecal analysis and evaluation of food and feeding in ungulates
- 2.4. Scat analysis and evaluation of food and feeding in carnivores

### **Unit-III Advanced Methods**

- 3.1. Remote sensing and Geographical information system applications in wildlife research
- 3.2. Systems analysis and modelling
- 3.3. Environmental Impact Assessment- Introduction and Procedural steps
- 3.4. Radio Telemetry as a wildlife research tool

### **Unit IV: Statistics and preparation of manuscript**

- 4.1. a) Sampling methods for collecting data, processing and analysis of data.  
b) Manuscript writing and presentation of data.
- 4.2. Correlation and regression analysis.
- 4.3. Tests of significance (t-test and chi-square test).
- 4.4. Multivariate analysis, non-parametric tests (Mannwhiteny U test) and one way analysis of variance (ANOVA)