

## GROUP - B

### PAPER-IV WILD LIFE CONSERVATION AND ECOTOXICOLOGY

(Questions will be set from each Unit)

#### UNIT - I Wild life conservation

1. Wild lifeM : (a) Values of wild life - positive and negative. (b) Our conservation ethics. (c) Importance of conservation. (d) Causes of Depletion. (e) World conservation strategies.
2. Habitat Analysis, Evaluation and management of wild life : (a) Physical parameters - Topography, Geology, soil and water. (b) Biological Parameters - food, cover, forage, browse and cover estimation. (c) Standard evaluation procedures - remote sensing and GIS.
3. Management of habitats : (a) Setting back succession. (b) Grazing logging. (c) Mechanical treatment. (d) Advancing the successional process. (e) Cover construction. (f) Preservation of general genetic diversity.

#### UNIT - II Wild life Conservation

Wild life population, wild life policy, Legislation and Practical Implementation.

1. Population estimation : (a) Population density, Natality, Birth rate, Mortality, fertility schedules and Sex ratio Computation. (b) Faecal Analysis of ungulates and carnivores - Faecal Samples, slide preparation, Hair identification, Pug marks and census Methods.
2. National Organization : (a) Indian board of wild life. (b) Bombay Natural History Society. (c) Voluntary organization involved in wild life conservation.
3. Wild life Legislation - Wild Protection act - 1972, its amendments and implementation.

#### UNIT - III Ecotoxicology

1. Basic concept of Toxicology : (a) Toxicants and toxicity. (b) Factors that effect the environmental concentration of toxicants. (c) Factors that influence the toxicity. (d) Effects and response. (e) Dose response relationship.
2. Toxicological testing methods : (a) General test design. (b) Acute Toxicity test. (c) LD<sub>50</sub> test. (d) Skin and Eye test. (e) Toxicity Curves.

#### UNIT - IV Ecotoxicology

1. Pathological techniques in toxicology and general approaches.
2. Basic techniques in Autopsy and Histological Practise.  
Methods applicable to specific organ System - Skin, Subcutaneous tissue, Pulmonary Systems, Digestive system, and Urinary tract.
3. Toxicants of Public health hazards :
  1. Toxic chemical
  2. Pesticides
  3. Automobile emissions
  4. Heavy metals
  5. Fertilizers
  6. Food Additives.
  7. Environmental Mutagenesis
  8. Radio active toxicity.