

## BES –C-701 **Himalayan Ecology & Biodiversity**

### **UNIT 1**

Geological features of rocks: Types of mountains and their physiographic features with special reference to Himalayas, Seismicity and Neotectonics in the Himalayas and their effect on the environment.

### **UNIT 2**

Climate of the Himalayas and the influence of the Himalayas on the climate of India, Forests and Forestry in Himalayan region (Introduction, Floristics, Forest influences, forest destruction and denudation), Forest types and productivity, Carbon sequestration, Forest base industries, Shifting cultivation, Migratory grazing).

### **UNIT 3**

Economic values – medicinal plants, drugs, fisheries and livelihoods; ecological services, Economically important flora of the Himalayan region with special reference to food, fodder, fibre, timber and medicinal importance.

### **UNIT 4**

Natural and anthropogenic disturbances; habitat loss, habitat degradation, and habitat fragmentation; hunting; over-exploitation; deforestation; hydropower development; invasive species; land-use changes; overgrazing; man wildlife conflicts; consequences of biodiversity loss.

### **UNIT 5**

In situ conservation (Biosphere Reserves, National Parks, Wildlife Sanctuaries); Ex-situ conservation (botanical gardens, zoological gardens, gene banks, seed and seedling banks, pollen culture, tissue culture and DNA banks), India as a mega diversity nation; National Biodiversity Action Plan.