

M.Sc. (FINAL) BOTANY

PAPER-VIII B ADVANCED ECOLOGY

UNIT-I

1. Scope of grassland ecology; grassland climate, Basis of grassland classification, phytogeography of grasslands, major grassland types, grasslands in India with special reference to Rajasthan.
2. Grassland as an ecosystem; Dynamics of grassland ecosystem, nutrition of grasslands, Grass-legume association; Ecology of fire in grasslands; Grasses and grasslands in relation to soil conservation; management of grasslands.

UNIT-II

3. Inter-relationships between physico-chemical properties and biota of lentic freshwater ecosystems. Diel cycles and their significance.
4. Organic matter production in freshwater ecosystems; ecological pyramids; eutrophication, its causes and consequences.

UNIT-III

7. Environmental pollution – types, effects on plants, biomonitoring, control, green house effect, bio-indicators.
8. Environmental impacts of mining and industrialization.

UNIT-IV

9. Management and utilization of inland freshwater resources; management of forest resources.
9. Survey and classification of natural resources; conservation; Development without destruction; management of resources.
10. Biomass as a source of energy, non-conventional sources of energy.
11. Biological diversity; Biosphere reserves; threatened plants of India.

UNIT-V

12. Waste management – types, transportation, disposal, reuse and recyclings; Environmental Biotechnology.
13. Wastelands – Description, classification, reclamation.
14. Environmental education; remote sensing.

** Forest ecosystem : Major forest types of the world and of India; forest environment, food chains, energetics, and and biogeochemical cycles operating in forests.