

B.Sc. (Hons.) Semester – I

BES-C-101 - Basics of Environmental Science

Unit – 1

Environmental Science: Definition, Aim of study and Scope and importance. Differences between Ecology and Environmental Science. Components of the Environment: Definitions of Atmosphere, Hydrosphere, Lithosphere and Biosphere - their complex interactions and significance.

Unit – 2

- Ecosystems – Definitions. Classification of the ecosystem – Terrestrial and Aquatic with their divisions. Structure of the ecosystem - Function of ecosystem - food chain – food web, Ecological pyramids. Energy flow in an ecosystem.

Unit – 3

Biotic and Abiotic factors: Influence Temperature, Wind and Water, Edaphic, Topographic on flora and fauna and their relationship.

Unit - 4

Ecological Niche: Concept and Types of niches: Spatial, Trophic and Multidimensional – Niche parameters: Form, Position and Width – Niche Partitioning - Realized and Fundamental Niche. Biomes: Definition and concept. Classification of biomes.

Unit - 5

Ecological succession – Primary and Secondary succession – Natural and man-influenced succession, – Hydrarch and Xerarch - Climax vegetation and their theories; Ecotone and Edge effect; Ecological equivalents; Ecotypes and Ecophenes; Ecological indicators.