

SEMESTER- II
VALUE ADDED COURSE
PAPER CODE: VAC-201
ENVIRONMENTAL STUDIES

TOTAL CREDITS: 4

[3:1:0 :: 35:15:00]

TIME: 2 Hours

MARKS: 35

Total Lectures: 30

Unit 1: Basics of Environmental Studies: (02)

Definition; Components of environment: Environmental education

Unit 2: Natural Resources: Renewable and Nonrenewable Resources (08)

Nature and natural resources their conservation and associated problems:

- Forest resources: Uses, types and importance, Joint Forest Management
- Water resources: Use, over exploitation of surface and groundwater; Dams: Benefits and problems; Flood and Drought
- Mineral resources: Mineral resources in India; Use and exploitation
- Food resources: World food problems and food insecurities
- Energy resources: Renewable and Nonrenewable energy sources; Use of alternate energy sources
- Land resources: Land as a resource; Land degradation, landslides, soil erosion, desertification

Unit 3: Ecology and Ecosystems (05)

Concept of ecology, Population ecology, Community ecology

- Concept of an ecosystem, different types of ecosystem
- Food chains, food webs
- Energy flow in the ecosystem

Unit 4: Biodiversity and its conservation (05)

Biodiversity: Levels of biological diversity

- Values of biodiversity
- Hot-Spots of biodiversity, Mega-biodiversity countries

- Threat to biodiversity
- Conservation of biodiversity (*In-situ* and *Ex-situ*)

Unit 5: Environmental Pollution and Management (05)

(a) Nature, Causes, Effects and Control measures of – Air pollution, Water pollution, Soil pollution, Noise pollution, Vision pollution

(b) Solid waste management: Causes, effects and disposal methods; Management of wastes

Unit 6: Environmental Policies and Practices (05)

Constitutional Provisions for protecting environment- Article 48(A), 51A(g)

- Environmental Laws: The Environment (Protection) Act, 1986; The Air (Prevention and Control of Pollution) Act, 1981; The Water (Prevention and Control of Pollution) Act 1974
- Climate change, Global warming and Protocols, Acid rain

CA: Field Work Report/Project Report/Plantation Program/Preparation of plant sapling

Marks: 15 (10+5) [Report+Viva voce]

[Based on any one of the following topics and to be evaluated by internal teachers only)

- Environmental assets - River/Forest/Grassland/Hill/Mountain *etc.*
- Environmental pollution - Urban/Rural/Industrial/Agricultural
- Study of common Plants/Insect /Birds/Wild life *etc.*
- Study of simple ecosystems: Pond/River/Hill slope *etc.*
- Participation & Report preparation on Medicinal Plants