

**SEMESTER- II**  
**VALUE ADDED COURSE**  
**PAPER CODE: VAC-201**  
**ENVIRONMENTAL STUDIES**  
**TOTAL CREDITS: 4**  
**[3:1:0:: 35:15:00]**

Course	Type	Course Code	Course details	L-T-P	Cr	Full Marks	CA Marks		ESE Marks	
							<b>P</b>	<b>T</b>	<b>P</b>	<b>T</b>
Env Sc.	Value Added Course	VAC-201	VAC	2-1-0	3	50	00	15	00	35

**TIME: 2 Hours**  
**Total Lectures: 30**

**MARKS: 50**

**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 ecosystems.
- 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/Wildlife *etc.*

- Study of simple ecosystems: Pond/River/Hill slope *etc.*
- Participation & Report preparation on Medicinal Plants