

PAPER: ENVIRONMENTAL STUDIES (Mandatory for UG Programs)

Max. Marks: 50

Theory: 35

Internal Assessment: 15

Credit: 2

Note: There shall be nine questions in all. Question no. 1 shall be compulsory, consisting of eight short answer type questions covering the entire syllabus. Two questions will be asked from each unit. Student will have to attempt one question from each unit. Each question shall carry equal marks.

For Internal Assessment the students will be required to, but not limited to, any of the following Field work:

- Visit to a local area to document environmental assets - river/forest/grassland/hill/mountain
- Visit to a local polluted site-Urban/Rural/Industrial/Agricultural
- Study of common plants, insects, fish-fauna, amphibians, reptiles, birds or mammals.
- Study of simple ecosystems-pond, river, hill slopes, etc. Or any innovative work or model related to environment.

Unit-I

Basic concepts: Environment - definition and significance; habitat and ecological niche; biosphere; atmosphere; lithosphere and hydrosphere.

Factors affecting environment: Abiotic factors – light, temperature, humidity, topography; Biotic factors – microorganisms, animals, plants and humans.

Sources of energy: Renewable and non-renewable sources.

Unit-II

Ecosystem: Definition, types and functions; energy flow – food chains, food webs, trophic structure; concept of productivity.

Biogeochemical cycles: Hydrological, gaseous and sedimentary cycles.

Biological invasion and its impact on environment.

Unit-III

Concept of population, population density, natality, mortality, carrying capacity, growth forms.

Human population: National and international concerns, Indian efforts to control the growing population; Sustainable development.

Unit-IV

Environmental pollution: Air pollution; Water pollution; Soil pollution; Noise pollution; Plastic pollution and Marine pollution.

Solid waste management; Ozone depletion; Global warming and climate change.

Course Learning Outcomes

The course will empower the under graduate students by helping them to:

1. Gain in depth knowledge on natural processes and resources that sustain life and govern economy
2. Understand the consequences of human actions on the web of life and quality of life
3. Develop critical thinking for shaping strategies (Scientific, social, economic and legal) for environmental protection
4. Explain sustainable development, its goal, targets, challenges and strategies for sustainable development

Semester 1
Human Values and Ethics

VAC-1 Human Values & Ethics
Credits:2 (Hrs./Week: 2)

Maximum Marks: 50
Theory Examination: 35
Internal Assessment: 15
Time: 2 hrs.

Course Outcomes: -

- Students will demonstrate a comprehensive understanding of the importance of human values and Ethics in their personal lives and professional careers.
- Students will develop critical thinking abilities to assess how family, society, and educational institutions shape the incorporation of human values, clarifying their individual roles in fostering moral development.
- Students will be able to apply human values and ethics in real life settings and will be able to deal with the ethical challenges prevalent in the institutions.

Unit I

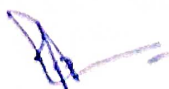
Human Values: Definitions & Types of Values: personal, social, and cultural, Core Values.
Ethics: Definition, Ethics vs Values, Importance of Ethics, The Role of Ethics in Society.
Integrity: Meaning and its role in Personal life.

Unit II:

Ethical Dilemma: Meaning and Nature, Common Ethical Dilemmas. Ethical Decision Making: Meaning & Steps in Ethical Decision Making: identifying the problem, considering options, evaluating consequences, making a decision.
Challenges for ethical practices in institutions: Ragging, suicide and need for educational counselling, violence and peaceful protest, conflict resolution.

Suggested readings:

1. Prof.D.R Kiran "*Professional Ethics and Human Values*"



2. A Textbook On Professional Ethics And Human Values. (2007), India: New Age International (P) Limited.
3. Prof.A.R.Aryasri, DharanikotaSuyodhana "*Professional Ethics and Morals*" Maruthi Publications.
4. A.Alavudeen, R.KalilRahman and M.Jayakumaran "*Professional Ethics and Human Values*" -Laxmi Publications.
5. PSR Murthy "*Indian Culture, Values and Professional Ethics*" BS Publication

