

Part IV Environmental Studies and Value Education

(For Undergraduate Courses)

Syllabus

Environmental Studies

Unit I : The Multidisciplinary Nature of Environmental Studies

Definition, scope and importance

Need for public awareness

Unit 2: Natural Resources - Renewable and non-renewable resources:

Natural resources and associated problems.

- (a) **Forest resources:** Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
- (b) **Water resources:** Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
- (c) **Mineral resources:** Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
- (d) **Food resources:** World food problems, changes caused by agriculture and over-grazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
- (e) **Energy resources:** Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Case studies.
- (f) **Land resources:** Land as a resource, land degradation, man induced landslides, soil erosion, and desertification.
Role of an individual in conservation of natural resources.
Equitable use of resources for sustainable life styles.

Unit 3: Ecosystems

Concept of an ecosystem.

Structure and function of an ecosystem.

Producers, consumers and decomposers.

Energy flow in the ecosystem.

Ecological succession.

Food chains, food webs and ecological pyramids.

Introduction, types, characteristic features, structure and function of the following ecosystem:

- (a) Forest ecosystem
- (b) Grassland ecosystem
- (c) Desert ecosystem
- (d) Aquatic ecosystem (ponds, streams, lakes, rivers, oceans, estuaries)

Unit 4: Bio-diversity and its Conservation

Introduction – Definition: genetic, species and ecosystem diversity.

Biogeographical classification of India.

Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.

Biodiversity at global, national and local levels.
 India as a mega-diversity nation.
 Hot-spots of biodiversity.
 Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts.
 Endangered and endemic species of India.
 Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

Unit 5: Environmental Pollution

Definition, causes, effects and control measures of
 (a) Air pollution
 (b) Water pollution
 (c) Soil pollution
 (d) Marine pollution
 (e) Noise pollution
 (f) Thermal pollution
 (g) Nuclear hazards.
 Solid waste management: Causes, effects and control measures of urban and industrial wastes.
 Role of an individual in prevention of pollution.
 Pollution case studies.
 Disaster management: floods, earthquake, cyclone and landslides.

Unit 6: Social Issues and the Environment

From Unsustainable to Sustainable development
 Urban problems related to energy.
 Water conservation, rain water harvesting, watershed management.
 Resettlement and rehabilitation of people : its problems and concerns. Case studies.
 Environmental ethics: Issues and possible solutions.
 Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
 Wasteland reclamation.
 Consumerism and waste products.
 Environment Protection Act.
 Air (Prevention and Control of Pollution) Act.
 Water (Prevention and Control of Pollution) Act.
 Wild life Protection Act.
 Forest Conservation Act.
 Issues involved in enforcement of environmental legislation.
 Public awareness.

Unit 7: Human Population and Environment

Population growth, variation among nations.
 Population explosion –Family Welfare Programme.
 Environment and human health.
 Human Rights.
 Value Education.
 HIV/AIDS.
 Women and Child Welfare.
 Role of Information Technology in Environment and human health.

Case Studies.

Unit 8: 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, and birds.

Study of simple ecosystems – pond, river, hill slopes etc. (Field work Equal to 5 lecture hours)

Recommended Text:

Board of Editors. *Environmental Studies*. Salem: Paavai Publication, 2008.

Part- IV Value Education - III Year – Fifth Semester

Objective:

Values are socially accepted norms to evaluate objects, persons, and situations that form part and parcel of sociality. A value system is a set of consistent values and measures. Knowledge of the values are inculcated through education. It contributes in forming true human being, who are able to face life and make it meaningful. There are different kinds of values like, ethical or moral values, doctrinal or ideological values, social values and aesthetic values. Values can be defined as broad preferences concerning appropriate courses of action or outcomes. As such, values reflect a person's sense of right and wrong or what "ought" to be. There are representative values like, "Equal rights for all", "Excellence deserves admiration". "People should be treated with respect and dignity". Values tend to influence attitudes and behavior and help to solve common human problems. Values are related to the norms of a culture.

Unit I:

Value education-its purpose and significance in the present world – Value system – The role of culture and civilization-Holistic living – Balancing the outer and inner – Body, Mind and Intellectual level- Duties and responsibilities.

Unit II :

Salient values for life- Truth, commitment, honesty and integrity, forgiveness and love, empathy and ability to sacrifice, care, unity , and inclusiveness, Self esteem and self confidence, punctuality – Time, task and resource management – Problem solving and decision making skills- Interpersonal and Intra personal relationship – Team work – Positive and creative thinking

Unit III :

Human Rights – Universal Declaration of Human Rights – Human Rights violations – National Integration – Peace and non-violence – Dr. A P J Kalam's ten points for enlightened citizenship – Social Values and Welfare of the citizen – The role of media in value building.

Unit IV:

Environment and Ecological balance – interdependence of all beings – living and non-living. The binding of man and nature – Environment conservation and enrichment.

Unit V :

Social Evils – Corruption, Cyber crime, Terrorism – Alcoholism, Drug addiction – Dowry – Domestic violence – untouchability – female infanticide – atrocities against women How to tackle them.

Books for Reference:

1. M.G.Chitakra: *Education and Human Values*, A.P.H.Publishing Corporation, New Delhi, 2003.
2. Chakravarthy, S.K. : *Values and ethics for Organizations: Theory and Practice*, Oxford University Press, New Delhi , 1999.
3. Satchidananda, M.K.: *Ethics, Education, Indian Unity and Culture*, Ajantha Publications, Delhi, 1991.
4. Das, M.S. & Gupta, V.K. : *Social Values among Young adults: A changing Scenario*, M.D. Publications, New Delhi, 1995.
5. Bandiste, D.D.: *Humanist Values: A Source Book*, B.R. Publishing Corporation, Delhi, 1999.
6. Ruhela, S.P. : *Human Values and education*, Sterling Publications, New Delhi, 1986.
7. Kaul, G.N.: *Values and Education in Independent Indian*, Associated Publishers, Mumbai, 1975.
8. NCERT, *Education in Values*, New Delhi, 1992.
9. Swami Budhananda (1983) *How to Build Character A Primer* : Ramakrishna Mission, New Delhi.
10. *A Cultural Heritage of India* (4 Vols.), Bharatiya Vidya Bhavan, Bombay. (Selected Chapters only).
11. *For Life, For the future : Reserves and Remains* – UNESCO Publication.
12. *Values, A Vedanta Kesari Presentation*, Sri Ramakrishna Math, Chennai, 1996.
13. Swami Vivekananda, *Youth and Modern India*, Ramakrishna Mission, Chennai.
14. Swami Vivekananda, *Call to the Youth for Nation Building*, Advaita Ashrama, Calcutta.
15. *Awakening Indians to India*, Chinmayananda Mission, 2003.