



**PARVATHANENI BRAHMAYYA
SIDDHARTHA COLLEGE OF ARTS & SCIENCE**
Autonomous
Siddhartha Nagar, Vijayawada-520010
Re-accredited at 'A+' by the NAAC

23BOCVL101: ENVIRONMENTAL EDUCATION

Offered to: B.A.Hons (ECO),BBA Hons(GEN & ANA) &
BCOM Hons (BAK,BPM,CA,FIN,GEN,TPP)

Course Type: Common Value – Added Course

Semester: I

30Hours

Credits: 04

Course Prerequisites: Knowledge of Environmental Education at +2 level.

Course Description: This course will provide one with a basic and comprehensive understanding of environment and natural resources Enable the student with depth of topics and helps them to gain an appreciation in the environmental degradation and impacts On the other hand, importance of understanding conservation of environment provides an extensive knowledge to the student.

Course objective: A Generic Course intended to create awareness that the life of human beings is an integral part of environment and to inculcate the skills required to protect environment from all sides.

Course outcomes: On completion of this course the students will be able to

1. Understand the nature, components of an ecosystem and that humans are an integral part of nature.
2. Realize the importance of environment, the goods and services of a healthy biodiversity, dependence of humans on environment.
3. Evaluate the ways and ill effects of destruction of environment, population explosion on ecosystems and global problems consequent to anthropogenic activities.
4. Discuss the laws/ acts made by government to prevent pollution, to protect biodiversity and environment as a whole.
5. Acquaint with international agreements and national movements, and realize citizen's role in protecting environment and nature.

Syllabus

Unit 1: Environment and Natural Resources

6 Hrs.

1. Multidisciplinary nature of environmental education; scope and importance.
2. Man as an integral product and part of the Nature.
3. A brief account of land, forest and water resources in India and their importance.
4. Biodiversity : Definition; importance of Biodiversity - ecological, consumptive, productive, social, ethical and moral, aesthetic, and option value.
5. Levels of Biodiversity: genetic, species and ecosystem diversity.

Unit-2: Environmental degradation and impacts

10Hrs

1. Human population growth and its impacts on environment; land use change, land degradation, soil erosion and desertification.
2. Use and over-exploitation of surface and ground water, construction of dams, floods, conflicts over water (within India).
3. Deforestation: Causes and effects due to expansion of agriculture, firewood, mining, forest fires and building of new habitats.
4. Non-renewable energy resources, their utilization and influences.
5. A brief account of air, water, soil and noise pollutions; Biological, industrial and solid wastes in urban areas. Human health and economic risks.
6. Green house effect - global warming; ocean acidification, ozone layer depletion, acid rains and impacts on human communities and agriculture.
7. Threats to biodiversity: Natural calamities, habitat destruction and fragmentation, over exploitation, hunting and poaching, introduction of exotic species, pollution, predator and pest control.

Unit 3: Conservation of Environment

10 Hrs

1. Concept of sustainability and sustainable development with judicious use of land, water and forest resources; afforestation.
2. Control measures for various types of pollution; use of renewable and alternate sources of energy.
3. Solid waste management: Control measures of urban and industrial waste.
4. Conservation of biodiversity: In-situ and ex-situ conservation of biodiversity.
5. Environment Laws: Environment Protection Act; Act; Wildlife Protection Act; Forest Conservation Act.
6. International agreements: Montreal and Kyoto protocols; Environmental movements: Bishnois of Rajasthan, Chipko, Silent valley.

Suggested activities to learner: (4 hours)

1. Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc
2. Visit to a local polluted site-Urban/Rural/Industrial/Agricultural site.
3. Study of common plants, insects, birds and basic principles of identification.
4. Study of simple ecosystems-forest, tank, pond, lake, mangroves etc.
5. Case study of a Forest ecosystem or a pond ecosystem.

Suggested text book :

1. ErachBarucha (2004) Text book of Environmental Studies for Undergraduate courses
Prepared for University Grants Commission) Universities Press.
2. PurnimaSmarath (2018) Environmental studies Kalyani Publishers, Ludhiana

Reference Books :

1. Odum, E.P., Odum, H.T. & Andrews, J. (1971) *Fundamentals of Ecology*. Philadelphia:Saunders.
2. Pepper, I.L., Gerba, C.P. &Brusseau, M.L. (2011).
3. *Environmental and Pollution Science*.Academic Press.Raven, P.H., Hassenzahl, D.M. & Berg, L.R. (2012)
4. *Environment. 8th edition*. JohnWiley & Sons.
5. Singh, J.S., Singh, S.P. and Gupta, S.R. (2014) *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi.
6. Sengupta, R. (2003) *Ecology and economics: An approach to sustainable development*.OUP.
7. Wilson, E. O. (2006) *The Creation: An appeal to save life on earth*. New York: Norton.
8. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll (2006) *Principles of Conservation Biology*. Sunderland: Sinauer Associates,

Question Paper Pattern for Common Value – Added Courses (Theory)

(a) Internal Examination: 15Marks (SECTION A(5M) & SECTION B(10M))

(b) Semester End Exam : 35 Marks

Total (a+b): 50Marks

SEE Consists

(i) Section A : Set 5 questions, atleast one question from each unit.

Each question carries 5 Marks (5M X 3 =15)

(ii) Section B : Set 3 questions, one from each unit .

Each question carries 10 Marks (10M X 2 =20)

Model Question Paper

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Max.Marks: 35

Max.Time: 2Hours

Pass Min: 14

Section-A

Answer any **THREE** from the following

3x5 =15Marks

1. Write a short note on levels of biodiversity
2. Explain the concept of green house effect
3. Describe the environment protection act
4. Explain the non renewable energy resources
5. Write a short note on soil erosion

Section-B

Answer any **TWO** from the following

2 x10 = 20Marks

6. Describe the multidisciplinary nature of environmental education. Add a note on scope and importance.
7. Discuss the causes effects and control measures of soil pollution
8. Explain in detail solid waste management
