

# V.S.M. COLLEGE (A), RAMACHANDRAPURAM

## III B.Sc.: SEMESTER- VI: CLUSTER ELECTIVE -A PAPER VIII-A-1: PLANT DIVERSITY AND HUMAN WELFARE

PAPER CODE-1662510

Total hours of teaching 60hrs @ 3hrs per week

Credits : 3

### Unit-I: Plant diversity and its scope: (12hrs)

1. Genetic diversity, Species diversity, Plant diversity at the ecosystem level, Agro biodiversity and cultivated plant taxa, wild taxa.
2. Values and uses of biodiversity: Ethical and aesthetic values,
3. Methodologies for valuation, Uses of plants.

### Unit -II: Loss of biodiversity: (12hrs)

1. Loss of genetic diversity, Loss of species diversity, Loss of ecosystem diversity, Loss of agro biodiversity, projected scenario for biodiversity loss.
2. Management of plant biodiversity: Organizations associated with biodiversity management-Methodology for execution-IUCN, UNEP, UNESCO, WWF, NBPGR, Biodiversity legislation and conservations, Biodiversity information management and communication.

### Unit-III: Contemporary practices in resource management: (12hrs)

1. Environmental Impact Assessment (EIA), Geographical Information System GIS, Participatory resource appraisal, Ecological footprint with emphasis on carbon footprint, Resource accounting;
2. Solid and liquid waste management

### Unit -IV: Conservation of biodiversity (12hrs)

1. Conservation of genetic diversity, species diversity and ecosystem diversity, *In situ* and *ex situ* conservation.
2. Social approaches to conservation, Biodiversity awareness programmes, Sustainable development.

### Unit- V: Role of plants in relation to Human Welfare (12hrs)

1. Importance of forestry, their utilization and commercial aspects-  
a) Avenue trees, b) Ornamental plants of India. c) Alcoholic beverages through ages.
2. Fruits and nuts: Important fruit crops their commercial importance. Wood, fiber and their uses.

### Suggested activities:

1. Study of flora and its diversity in the college campus or local area.
2. Enumerating wild and exotic species(*Parthenium*, Water hyacinth etc.)
3. Student Study Project work on any one of the International organizations striving for preservation of biodiversity.
4. Study of conservation efforts of local people, and civic bodies.
5. Study of locally available fruits in different seasons.
6. Enumerating the avenue plantations and their diversity in your town/city.

UNIVERSITY NOMINEE

64  
SUBJECT EXPERT

H. Rajeev  
MEMBER

SUBJECT EXPERT

CHAIRPERSON  
BOARD OF STUDIES

APPROVED

**V.S.M. COLLEGE (A), RAMACHANDRAPURAM**  
**III B.Sc.: SEMESTER- VI: CLUSTER ELECTIVE -A**

**Suggested Readings:**

1. Krishnamurthy, K.V. (2004). An Advanced Text Book of Biodiversity -Principles and Practices. Oxford and IBH Publications Co. Pvt. Ltd. New Delhi.
2. Singh, J. S., Singh, S.P. and Gupta, S. (2006). Ecology, Environment and Resource Conservation. Anamaya Publications, New Delhi.
3. Rogers, P.P., Jalal, K.F. and Boyd, J.A. (2008). An Introduction to Sustainable Development. Prentice Hall of India Private Limited, New Delhi.

  
CHAIRPERSON  
BOARD OF STUDIES

  
UNIVERSITY NOMINEE

K. Chandy A. J. ...  
65 SUBJECT EXPERT / SUBJECT EXPERT  
H. Raju  
MEMBER

**APPROVED**