

COURSE III- BIO RESOURCES

Unit I

Biodiversity – understanding biodiversity, value of biodiversity, threats, conserving biodiversity, biodiversity sustainability, natural and man included changes in Biodiversity – Applications of Biotechnology in Biodiversity.

Unit II

Renewable energy – Sugar cane molasses to ethanol, Bagasse to ethanol, Biomass to renewable energy beneficial by products, biofuels.

Unit III

Bio resources and biotechnology – Genetically modified organisms; benefits and risk generic conservation and sustainable use of bioresources.

Unit IV

Conservation strategies, past, present and future; Managing land resources, Managing aquatic resources monitoring and the future prospects.

Unit V

Patterns of resource use : Protected ecosystems, Biosphere reserves, National parks, Wild life sanctuaries, Forest Reserves. Agricultural land – ecological consequences of agriculture, Restoration of ecosystems.

Reference Books:

1. Wilson, E.J. 1988 Biodiversity. National Academy Press, Washington, D.C., 521 pp.
2. Sen, P.K. and Prasad, N. 2002, Introduction to Geomorphology of India, Allied Publishers Private Limited, Mumbai, 378 pp.
3. Peter D.Stiling 1992, Ecology : Theories and Applications, Prentice Hall, new Jersey 539 pp.
4. Noss, R.F. & A.Y. Cooperinder 1994, Saving Nature's Legacy : Resboring and protecting Biodiversity. Island Press, Washington, D.C. 416 pp.