OPEN ELECTIVES (Offered by Botany department for the students of other departments)

CO-6610 OET -I: DISASTER MANAGEMENT 4 hrs/ week/ 4 Credits/ 50 hrs

UNIT- I 10 Hrs
Introduction to Disasters: Concepts, and definitions of Disaster, Hazard, Vulnerability, Resilience, Risks.

UNIT- II 10 Hrs
Disasters: Classification, natural hazards and Man-made disasters, Causes, Impacts (including social, economic, political, environmental, health, psychosocial, etc.) Global trends in disasters, urban disasters and climatic change.

UNIT- III 10 Hrs
Approaches to Disaster Risk reduction: Disaster management cycle - Phases, Culture of safety, prevention, mitigation and preparedness community based DRR, Role of NDMA, NDRF, NIDM, STATE DM in disaster Management.

UNIT - IV 10 Hrs
Disasters and Development: Impact of Development projects such as dams, embankments, changes in Land-use etc, Climate Change. Relevance of indigenous knowledge and local resources

UNIT - V 10 Hrs

Suggested Reading list:
Govt. of India: Disaster Management Act 2005, Government of India, New Delhi.
Government of India, 2009. National Disaster Management Policy,
Gupta Anil K, Sreeja S. Nair. 2011 Environmental Knowledge for Disaster Risk Management, NIDM, New Delhi
Kapur, Anu & others, 2005: Disasters in India Studies of grim reality, Rawat Publishers, Jaipur
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CO-7610 OET -II: ENVIRONMENTAL AWARENESS  4 hrs/ week/ 4 Credits/ 50 hrs

UNIT- I  10 Hours
1. Multidisciplinary nature of environmental studies, Definition, scope and importance, Need for public awareness.

UNIT- II  10 Hours
2. 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 forest 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 overgrazing, 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.

UNIT- III  10 Hours
3. Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers.  
5. Ecological succession.  
6. Food chains, food webs and ecological pyramids.  
7. Introduction, types, characteristic features, structure and function of the following ecosystem:-  
   a. Forest ecosystem,  
   b. Grassland ecosystem,  
   c. Desert ecosystem,  
   d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

UNIT- IV  10 Hours
8. Social Issues and the Environment  
9. From Unsustainable to Sustainable development  
10. Urban problems related to energy  
11. Water conservation, rain water harvesting, watershed management  
UNIT- V

10 Hours