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## ENVIRONMENTAL STUDIES – II

### Course Objectives:

1. To make student learn about the various natural resources.
2. To make students learn about the various environmental laws

### Learning Outcomes:

On successful completion of the course the learner will be able to

1. To know the environmental laws and sustainable development for the natural resources
2. Summarize the impact of urbanisation on environment.

### Detailed Syllabus:

#### Unit 1: Energy Resources (2L)

- Renewable and non-renewable, conventional and non-conventional energy sources- (solar, wind, tidal, hydro and SHP, geothermal, fossil fuels, nuclear resources), special reference to Indian scenarios.
- Case studies: Cochin airport, Muppandal Wind Park.

#### Unit 2: Environmental Management: Policies, Laws & Practices (8L)

- Concept and objectives, the evolution of Indian environmental policy.
- UN Conferences- UNCHE, WCED, and sustainable development, UNCED, WSSD.
- International agreements: CLRTAP, Basel Convention, London Dumping Convention, Convention on Biological Diversity (CBD), CITES, Cartagena Protocol, TRIPS, Montreal Protocol, UNFCCC (with updates- Kyoto Protocol and Paris Climate Agreement).
- International Organizations- FAO, UNEP, UNDP and MDGs, IUCN.
- Environment Laws: Wildlife Protection Act, 1972, Water (Prevention and Control of Pollution) Act, 1974, Water Cess Act 1977; Forest Conservation Act 1980, Air (Prevention & Control of Pollution) Act, 1981, Environment Protection Act, 1986 (with subordinate Acts and Rules); Role of National Green Tribunal
- Environmental movements: Chipko, Silent valley, Bishnoi, Narmada Bachao Andolan, Nava Danya
- Environmental standards- MINAS, NAAQS, BIS, WHO, Emission standards.
- Practices- Environmental audit & ISO 14000 certification audit; Earth Hour; Green Option Technologies ; EIA (concept, objectives, principles, generic process, the concept of EIA in India, advantages, and disadvantages).

#### Unit 3: Human Population and the Environment (2L)

- Human population growth: Characteristics of a population.
- Types of growth- exponential and arithmetic progression; 'J' and 'S' growth curve.
- Impacts of population growth on the environment.

**Unit 4: Fieldwork****(Equal to 5L)**

- Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.
- Visit a local polluted site-Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds, and basic principles of identification.
- Study of simple ecosystems-pond, river, Delhi Ridge, etc.

**References:**

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3. Enger, E. and Smith, B., Environmental Science: A Study of Interrelationships, Publisher: McGraw-Hill Higher Education; 12th edition, 2010.
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5. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339: 36-37.
6. McCully, P. 1996. Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.
7. McNeill, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.
8. Rosencranz, A., Divan, S., & Noble, M. L. 2001. Environmental law and policy in India. Tripathi 1992.
9. World Commission on Environment and Development. 1987. Our Common Future. Oxford University Press.