**Lesson Plan**

**Subject : Environmental Studies**

Lesson plan Duration : 15 Weeks

Work load (lecture/Practical) per week (in hours): Lectures: 3 hours

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| **Lecture No** | **Description** |
| 1 | Unit-1:The multidisciplinary nature of environmental studies. Definition, Scope and Importance. |
| 2 | Need for public awareness. Natural Resources: Renewable and Non-Renewable Resources:  |
| 3 | Natural resources and associated problems. |
| 4 | Forest Resources: Use and over-exploitation, deforestation, case studies.  |
| 5 | Timber extraction, mining |
| 6 | Dams and their effects on forests and tribal people.  |
| 7 | Water Resources- Use and over-utilization of surface and ground water,  |
| 8 | floods, drought, conflicts over water |
| 9 | Dams-benefits and problems |
| 10 | Food Resources- World Food Problems, changes caused by agriculture and over gazing,  |
| 11 | Effects of modern agriculture, fertilizer-pesticide problems |
| 12 | water logging, salinity, case studies |
| 13 | Energy Resources- Growing energy needs, renewable and non-renewable energy sources,  |
| 14 | Use of alternate energy sources. Case studies |
| 15 | Land Resources- Land as a resource,  |
| 16 | land, degradation, man induced landslides |
| 17 | Soil erosion and desertification |
| 18 | Role of an individual in conservation of natural resources.  |
| 19 | Equitable use of resources for sustainable lifestyle. |
| 20 | Unit-2: Ecosystem-Concept of an ecosystem. Structure and function of an ecosystem. |
| 21 | Producers, consumers and decomposers |
| 22 | Energy flow in the ecosystem. Ecological Succession. |
| 23 | Food Chains, food webs and ecological pyramids. Field Work. |
| 24 | Introduction, types, characteristic features, structure  |
| 25 | Forest Ecosystem, functions |
| 26 | Introduction, types, characteristic features, structure  |
| 27 | Grassland Ecosystem, function |
| 28 | Introduction, types, characteristic features, structure and function of Desert Ecosystem |
| 29 | Introduction, types, characteristic features, structure and function of Aquatic Ecosystems |
| 30 | ponds, streams, lakes, rivers, oceans, estuaries |
| 31 | Study of common plants, insects and birds. Study of simple ecosystems-pond, river, hill, slopes etc. (Field work equal to 5 lecture hours). |
| 32 | Unit-3: Biodiversity and its conservation,biogeographically classification of India |
| 33 | Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values. |
| 34 | Biodiversity of global, National and local levels,hotspot of biodiversity.threats |
| 35 | Endangered and endemic species of India. Conservation of Biodiversity- In situ and Ex-Situ conservation of biodiversity. |
| 36 | Environmental Pollution Definition. Cause, effects and control measures  |
| 37 | air, water noise , marine, soil,thermal , nuclear |
| 38 | Solid waste management- cause, effects and control measures of urban and industrial wastes |
| 39 | Role of an individual in prevention of pollution, Pollution case studies. Disaster management: floods, earthquake, cyclone and landslides |
| 40 | Unit-4: Social Issues and the Environment. From unsustainable to sustainable development.  |
| 41 | Urban potential related to energy, resettlement and rehabilitation, climate chang , global warming, case studies, wasteland reclamation, environmental protection act. |
| 42 | Air, water, wildlife protection act., forest conservation act, human population a and environment, HIV/AIDS, women and child welfare |