**LESSON PLAN**

**Name of the Faculty : Mrs. Asha Kumari**

**Discipline : Computer Science & Engineering**

**Semester : 4th**

**Subject : Environment Studies**

Lesson Plan Duration: 15 weeks(from January 2018 to April 2018)

\*\*Work Load(Lecture/Practical) per week(in hours)::Lectures:3

|  |  |  |
| --- | --- | --- |
| **Week** | **Theory** | |
| **Lecture Day** | **Topic(including assignment/test)** |
| 1st | 1st | Unit-1:The multidisciplinary nature of environmental studies. Definition, Scope and Importance. Need for public awareness. Natural Resources: Renewable and Non-Renewable Resources: Natural resources and associated problems.   1. Forest Resources: Use and over-exploitation, deforestation, case studies. Timber eztraction, mining, dams and their effects on forests and tribal people. |
| 2nd | (b)Water Resources- Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems |
| 3rd | (c)Mineral Resources- Use and exploitation, environmental effects of extracting and using mineral resources, case studies. |
| 2nd | 4th | (d)Food Resources- World Food Problems, changes caused by agriculture and overgazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies |
| 5th | ( e)Energy Resources- Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Case studies |
| 6th | (f)Land Resources- Land as a resource, land, degradation, man induced landslides, soil erosion and desertification. |
| 3rd | 7th | Role of an individual in conservation of natural resources. |
| 8th | Equitable use of resources for sustainable lifestyle. |
| 9th | Test of Unit-1 |
| 4th | 10th | Unit-2:Ecosystem-Concept of an ecosystem. Structure and function of an ecosystem. |
| 11th | Producers, consumers and decomposers. |
| 12th | Energy flow in the ecosystem. Ecological Succession. |
| 5th | 13th | Food Chains, food webs and ecological pyramids. Field Work. |
| 14th | Introduction, types, characteristic features, structure and function of  Forest Ecosystem |
| 15th | Introduction, types, characteristic features, structure and function of the  Grassland Ecosystem |
| 6th | 16th | Introduction, types, characteristic features, structure and function of Desert Ecosystem |
| 17th | Introduction, types, characteristic features, structure and function of Aquatic Ecosystems(ponds, streams, lakes, rivers, oceans, estuaries |
| 18th | Visit to a local area to document Environment assets-river/forest/grassland/hill/mountain. |
| 7th | 19th | Visit to a local polluted site- Urban /Rural Industrial/Agricultural |
| 20th | Study of common plants, insects and birds. Study of simple ecosystems-pond, river, hill, slopes etc. (Field work equal to 5 lecture hours). |
| 21st | Test of Unit-2 |
| 8th | 22nd | Unit-3:Biodiversity and its conservation... |
| 23rd | Introduction, Definition: genetic, species and ecosystem diversity. |
| 24th | Biogeographical classification of India |
| 9th | 25th | Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values. |
| 26th | Biodiversity of global, National and local levels. |
| 27th | India as a mega-diversity nation Hot spots of Biodiversity. |
| 10th | 28th | Threats to biodiversity: Habitat loss, poaching of wild life, man-wildlife conflicts. |
| 29th | Endangered and endemic species of India. Conservation of Biodiversity- In situ and Ex-Situ conservation of biodiversity. |
| 30th | Environmental Pollution Definition. Cause, effects and control measures of- (a) Air Pollution (b) Water Pollution (c) Soil Pollution (d) Marine Pollution (e) Noise Pollution (f) Thermal Pollution (g) Nuclear Hazards |
| 11th | 31st | Solid waste management- cause, effects and control measures of urban and industrial wastes |
| 32nd | Role of an individual in prevention of pollution,Pollution case studies. Disaster management: floods, earthquake, cyclone and landslides |
| 33th | Test of Unit-3 |
| 12th | 34th | Unit-4:Social Issues and the Environment. From unsustainable to sustainable development. |
| 35th | Urban problems related to energy. Environmental ethics-issues and possible solutions.Water conservation, rain water harvesting, watershed management. |
| 36th | Resettlement and rehabilitation of people: Its problems and concerns. Case Studies. |
| 13th | 37th | Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies. |
| 38th | Wasteland Reclamation. Consumerism and waste products. Environment Protection Act. |
| 39th | Air (Prevention and Control of Pollution) Act. Water (Prevention and Control of Pollution) Act. Wildlife Protection Act. |
| 14th | 40th | Forest Conservation Act. Issues involved in enforcement of environmental legislation. Public Awareness. Human population and the Environment. |
| 41th | Population growth, variation among nations. Population explosion-Family Welfare Programme. Environment and human health. Human rights. Value Education. HIV/AIDS, Women and Child Welfare. |
| 42nd | Role of Information Technology in Environment and Human Health. |
| 15th | 43th | Case Studies |
| 44th | Case Studies |
| 45th | Test of Unit-4 |