**LESSON PLAN**

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| **DISCIPLINE:**  **MECHANICAL ENGINEERING** | **SEMESTER:3rd(2020-21)** | **NAME OF THE FACULTY:**  **GOBIND CHANDRA BARIK** |
| **SUBJECT:**  **ENVIRONMENTAL STUDIES(TH-5)** | **NO. OF DAYS/WEEK CLASS ALLOTTED:**  **4P/WEEK** | **SEMESTER FROM DATE:**  **TO DATE:**  **NO. OF WEEKS: 15** |

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| **Sl No.** | **week** | **CLASS Day** | **Topics to be covered** |
| 1 | 1st | 1st day | Introduction to Environmental studies |
| 2nd day | Scope and importance of EVS. |
| 3rd day | Need for public awareness |
| 4th day | Need for public awareness. |
| 2 | 2nd | 1st day | Renewable and non renewable resources |
| 2nd day | Natural resources and associated problems. Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction mining, dams and their effects on forests and tribal people. |
| 3rd day | Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam’s benefits and problems. |
| 4th day | Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources. |
| 3 | 3rd | 1st day | Food Resources: World food problems ,changes caused by agriculture and overgrazing,effectsofmodernagriculture,fertilizerspesticidesproblems, water logging, salinity. |
| 2nd day | Energy Resources: Growing energy need, renewable and nonrenewable energy sources, use of alternate energy sources, case studies. |
| 3rd day | Land Resources: Land as a resource ,land degradation ,man induces landslides, soil erosion, and desertification. |
| 4th day | Role of individual in conservation of natural resources. |
| 4 | 4th | 1st day | Role of individual in conservation of natural resources. |
| 2nd day | Equitable use of resources for sustainable lifestyles. |
| 3rd day | Concept of an ecosystem. Structure and function of an ecosystem. |
| 4th day | Producers, consumers, decomposers. |
| 5 | 5th | 1st day | Energy flow in the ecosystems. |
| 2nd day | Ecological succession. |
| 3rd day | Food chains, food web sand ecological pyramids. |
| 4th day | Introduction, types, characteristic features, structure and function of the following ecosystem: |
| 6 | 6th | 1st day | Forest ecosystem: |
| 2nd day | Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries). |
| 3rd day | Introduction-Definition: genetics, species and ecosystem diversity. |
| 4th day | Biogeographically classification of India. |
| 7 | 7th | 1st day | Value of biodiversity: consumptive use, productive use, |
| 2nd day | Social, ethical, aesthetic and opt in values. |
| 3rd day | Biodiversity at global and national level. |
| 4th day | Biodiversity at local level. |
| 8 | 8th | 1st day | Threats to biodiversity: Habitats loss, poaching of wild life. |
| 2nd day | man wildlife conflicts. |
| 3rd day | Definition Causes, effects and control measures of:Air pollution. |
| 4th day | Water pollution. |
| 9 | 9th | 1st day | Soil pollution |
| 2nd day | Marine pollution |
| 3rd day | Noise pollution. |
| 4th day | Thermal pollution |
| 10 | 10th | 1st day | Nuclear hazards. |
| 2nd day | Solid waste Management |
| 3rd day | Causes, effects and control measures of urban and industrial wastes. |
| 4th day | Role of an individual in prevention of pollution. |
| 11 | 11th | 1st day | Disaster management |
| 2nd day | Floods, earth quake, cyclone and landslides. |
| 3rd day | From unsustainable to sustainable development. Urban problems related to energy. |
| 4th day | Water conservation, rain water harvesting |
| 12 | 12th | 1st day | water shed management. |
| 2nd day | Resettlement and rehabilitation of people; its problems and concern. |
| 3rd day | Environmental ethics: issue and possible solutions. |
| 4th day | Climate change, global warming, acid rain, ozone layer depletion |
| 13 | 13th | 1st day | nuclear accidents and holocaust, case studies |
| 2nd day | Air (prevention and control of pollution) Act. |
| 3rd day | Water (prevention and control of pollution) Act. |
| 4th day | Public awareness. |
| 14 | 14th | 1st day | Population growth and variation among nations. |
| 2nd day | Population explosion-family welfare program. |
| 3rd day | Population explosion-family welfare program. |
| 4th day | Environment and human health. |
| 15 | 15th | 1st day | Environment and human health. |
| 2nd day | Human rights. |
| 3rd day | Value education. |
| 4th day | Role of information technology in environment and human health. |