| LESSON PLAN | |
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| JHARSUGUDA ENGINEERING SCHOOL,JHARSUGUDA | |
| Name of the Faculty: JYOTI RANJAN NAYAK | Academic Year:2022-23 |
| Course No.: Th-5 | Course Name: ENVIRONMENTAL STUDIES |
| Program: Diploma | Branch:Electrical |
| Year/Sem: III | Section: |

| **Week No.** | **Period** | **Time**  **(min)** | **Unit/**  **Chapter** | **Topic to be covered** | **Teaching method** |
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| 1st |  | 55 | 1 | Objective of nature of environmental studies, concept | Black board |
|  | 55 | 1 | The Multidisciplinary nature of environmental studies | Black board |
|  | 55 | 1 | Definition, scope and importance, Need for public awareness | Black board |
|  | 55 | 1 | Revision of unit/chapter-1 | Black board |
| 2nd |  | 55 | 2 | Natural Resources  Renewable and non renewable resources: Natural resources and associated problems | Black board |
|  | 55 | 2 | Forest resources: Use and over-exploitation, deforestation, case studies | Black board |
|  | 55 | 2 | Timber extraction mining, dams and their effects on forests and tribal people. | Black board |
|  | 55 | 2 | Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam’s benefits and problems | Black board |
| 3rd |  | 55 | 2 | Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources. | Black board |
|  | 55 | 2 | Food Resources: World food problems ,changes caused by agriculture | Black board |
|  | 55 | 2 | Overgrazing,effectsofmodernagriculture,fertilizers-pesticidesproblems, water logging, salinity | Black board |
|  | 55 | 2 | Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources | Audio visual smart class |
| 4th |  | 55 | 2 | case studies | Black board |
|  | 55 | 2 | Land Resources: Land as a resource ,land degradation ,man induces landslides, soil erosion, and desertification. | Black board |
|  | 55 | 2 | Role of individual in conservation of natural resources, Equitable use of resources for sustainable lifestyles. | Black board |
|  | 55 | 2 | Revision of unit/chapter-2 | Black board |
| 5th |  | 55 | 3 | Concept of an ecosystem,Structure and function of an ecosystem | Audio visual smart class |
|  | 55 | 3 | Producers, consumers, decomposers, Energy flow in the ecosystems, Ecological succession | Black board |
|  | 55 | 3 | Food chains, food web sand | Black board |
|  | 55 | 3 | ecological pyramids, Introduction, types, characteristic features | Black board |
| 6th |  | 55 | 3 | structure and function of the following ecosystem | Black board |
|  | 55 | 3 | Forest ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries). | Black board |
|  | 55 | 3 | Revision of unit/chapter-3 | Black board |
|  | 55 | 4 | Biodiversity and it’s Conservation ,Introduction-Definition: genetics, species and ecosystem diversity. | Black board |
| 7th |  | 55 | 4 | Biogeographically classification of India | Black board |
|  | 55 | 4 | Value of biodiversity: consumptive use, productive use | Black board |
|  | 55 | 4 | Social ethical, aesthetic and opt in values | Black board |
|  | 55 | 4 | Biodiversity at global, national and local level | Black board |
| 8th |  | 55 | 4 | Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts | Black board |
|  | 55 | 4 | Revision of unit/chapter-4 | Black board |
|  | 55 | 5 | Environmental Pollution:Definition Causes, effects and control measures of:  a) Air pollution. | Audio visual smart class |
|  | 55 | 5 | b) Water pollution.  c) Soil pollution  d) Marine pollution | Audio visual smart class |
| 9th |  | 55 | 5 | e) Noise pollution.  f) Thermal pollution  g) Nuclear hazards. | Audio visual smart class |
|  | 55 | 5 | Solid waste Management: Causes, effects and control measures of urban and industrial wastes. | Black board |
|  | 55 | 5 | Role of an individual in prevention of pollution. | Black board |
|  | 55 | 5 | Disaster management: Floods, earth quake, cyclone and landslides | Black board |
| 10th |  | 55 | 5 | Revision of unit/chapter-5 | Black board |
|  | 55 | 6 | Social issues and the Environment :From unsustainable to sustainable development, Urban problems related to energy | Black board |
|  | 55 | 6 | Water conservation, rain water harvesting, water shed management. | Black board |
|  | 55 | 6 | Resettlement and rehabilitation of people; its problems and concern | Black board |
| 11th |  | 55 | 6 | Environmental ethics: issue and possible solutions | Black board |
|  | 55 | 6 | Climate change, global warming, acid rain, ozone layer depletion | Audio visual smart class |
|  | 55 | 6 | nuclear accidents and holocaust, case studies, Air (prevention and control of pollution) Act | Black board |
|  | 55 | 6 | Water (prevention and control of pollution) Act, Public awareness | Black board |
| 12th |  | 55 | 6 | Revision of unit/chapter-6 | Black board |
|  | 55 | 7 | Human population and the environment. | Black board |
|  | 55 | 7 | Population growth and variation among nations | Black board |
|  | 55 | 7 | Population explosion-family welfare program, Environment and human health | Black board |
| 13th |  | 55 | 7 | Human rights, Value education | Black board |
|  | 55 | 7 | Role of information technology in environment and human health. | Black board |
|  | 55 | 7 | Revision of unit/chapter-7 | Black board |
|  | 55 |  | Tutorial class for unit/Chapter-1 | Black board |
| 14th |  | 55 |  | Tutorial class for unit/Chapter-2 | Black board |
|  | 55 |  | Tutorial class for unit/Chapter-3 | Black board |
|  | 55 |  | Tutorial class for unit/Chapter-4 | Black board |
|  | 55 |  | Tutorial class for unit/Chapter-5 | Black board |
| 15th |  | 55 |  | Tutorial class for unit/Chapter-6 | Black board |
|  | 55 |  | Tutorial class for unit/Chapter-7 | Black board |
|  | 55 |  | Semester Question and Answer discussion | Black board |
|  | 55 |  | Semester Question and Answer discussion | Black board |

Text Book:

1. Text book of Environmental studies, Erach Bharucha, UGC Publication
2. Fundamental concepts in Environmental Studies,D.D .Mishra, S.Chand & Co-Ltd
3. Textbook of Environmental Studies, K.Raghavan Nambiar, SCITECH Publication Pvt. Ltd.
4. Environmental Engineering,V.M.Domkundwar, Dhanpat Rai & Co