|  |  |  |
| --- | --- | --- |
| Discipline :**ELECTRICAL ENGINEERING** | Semester :**3rd** | Name of the Teaching Faculty:**SIBA PRASAD PANDA** |
| Subject:**ENVIRONMENTAL STUDIES** | No. of days/per week class allotted:**05** | Semester From date : **01.09.2020**To Date:**20.02.2021** |
| **Week** | **Class Day** | **Theory Topics** |
| 1ST | 1ST | Multidisciplinary nature of environmental studies- Introduction,  |
|  | 2ND | Definition , Scope and importance |
|  | 3RD | Need for public awareness |
|  | 4TH | Doubt clearing |
|  | 5TH  | Unit-2- Natural resources- Introduction , definition, Associated problems |
| 2ND | 1ST | Forest Resources- Use & over exploitation, deforestation, Case sutdies |
|  | 2ND | Timber extraction, mining, dams and their effects on forests and tribal people |
|  | 3RD | Water resources- use & over utilization of surface & ground water, floods, drought |
|  | 4TH | Conflicts over water, dams benefits and problems |
|  | 5TH  | Mineral resources- use & exploitation, environmental effects of extracting and using mineral resources |
| 3RD | 1ST | Food resources- World food problem, Changes caused by agriculture & over grazing, |
|  | 2ND | Effects of modern agriculture, fertilizers & pesticide problems, water logging & salinity |
|  | 3RD | Energy resources- Growing energy need, Renewable & non- renewable energy source, use of alternate energy sources |
|  | 4TH | Case studies, Land resources- land as a resource, land degradation, man induces landslides,  |
|  | 5TH  | Soil erosion, desertification |
| 4TH | 1ST | Role of individual in conservation of natural resources, Equitable use of resources for sustainable life styles |
|  | 2ND | Unit-3- Ecosystem: concept of ecosystem, structure of ecosystem  |
|  | 3RD | Function of ecosystem, Producers, consumers,decomposers |
|  | 4TH | Energy flow in eco system ,ecological succession |
|  | 5TH  | Food chain, food web, ecological pyramid |
| 5TH | 1ST | Forest ecosystem- definition, types, characteristics |
|  | 2ND | Forest ecosystem- structure & function |
|  | 3RD | Pond ecosystem |
|  | 4TH | Stream ecosystem |
|  | 5TH  | Lake ecosystem |
| 6TH | 1ST | River ecosystem |
|  | 2ND | Ocean ecosystem |
|  | 3RD | Estuaries ecosystem |
|  | 4TH | Unit -4- Biodiversity & its conservation: introduction, definition, genetics, species, and ecosystem diversity |
|  | 5TH  | Biogeographically classification of India |
| 7TH | 1ST | Value of biodiversity |
|  | 2ND | Biodiversity at global level |
|  | 3RD | Biodiversity at national level |
|  | 4TH | Habitat loss, poaching of wild life |
|  | 5TH  | Man wildlife conflicts |
| 8TH | 1ST | Doubt clearing  |
|  | 2ND | Unit-5- Environmental pollution: introduction, definition |
|  | 3RD | Air pollution |
|  | 4TH | Control of air pollution |
|  | 5TH  | Water pollution |
| 9TH | 1ST | Control of water pollution |
|  | 2ND | Soil pollution |
|  | 3RD | Marine pollution |
|  | 4TH | Noise pollution |
|  | 5TH  | Thermal pollution |
| 10TH | 1ST | Nuclear pollution |
|  | 2ND | Solid waste management- causes, effect |
|  | 3RD | Control measures |
|  | 4TH | Waste management |
|  | 5TH  | Role of individual in prevention of pollution |
| 11TH | 1ST | Flood management |
|  | 2ND | Earth quake magement |
|  | 3RD | Cyclone management |
|  | 4TH | Landslides management |
|  | 5TH  | Unit-6- Social issues & the environment: From unsustainable to sustainable development, urban problems related to energy. |
| 12TH | 1ST | Water conservation , rain water harvesting |
|  | 2ND | Water shed management,resettlement and rehabilitation of people; its problem and concern |
|  | 3RD | Environmental ethics: issue and possible solutions. |
|  | 4TH | Climate change, global warming |
|  | 5TH  | Acid rain , ozone layer depletion,  |
| 13TH | 1ST | Nuclear accidents and holocaust,  |
|  | 2ND | case studies |
|  | 3RD | Air ( prevention and control of pollution ) Act |
|  | 4TH | Water ( prevention and control of pollution ) Act |
|  | 5TH  | Public awareness |
| 14TH | 1ST | Doubt clearing |
|  | 2ND | Unit 7- Human population and the Environment: population growth and variation among nations (introduction) |
|  | 3RD | population growth and variation among nations |
|  | 4TH | Population explosion, family welfare program |
|  | 5TH  | Environment and human health |
| 15TH | 1ST | Human rights |
|  | 2ND | Value education |
|  | 3RD | Role of information technology in environment and human health |
|  | 4TH | Doubt clearing, revision |
|  | 5TH  | Revision and Previous year question discussion |