

Panipat Institute of Engineering & Technology
Department of CSE-AI&DS
LESSON PLAN

Subject: Environmental Sciences
Session: Jan.-June 2023-24

Subject code: MC-901A
Semester: 4th semester

Sr. No.	Topic	CO Covered	Assignment No.	Teaching Methodology
1	The multidisciplinary nature of environmental studies, Definition, Scope and Importance, Need for public awareness	CO1	Assignment No.1	Smart Board and PPT
2	Natural Resources: Renewable and Non-Renewable Resources: Natural resources and associated problems			Smart Board and PPT
3	Forest Resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.			Smart Board and PPT
4	Water Resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.			Smart Board and PPT
5	Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.			Smart Board and PPT
6	Food Resources: World Food Problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.			Smart Board and PPT
7	Energy Resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Case studies.			Smart Board and PPT
8	Land Resources: Land as a resource, land, degradation, man induced landslides, soil erosion and desertification.			Smart Board and PPT
9	Role of an individual in conservation of natural resources, Equitable use of resources for sustainable lifestyle.			Smart Board and PPT
10	Ecosystem-Concept of an ecosystem: Structure and function of an ecosystem	CO2	Assignment No.2	Smart Board and PPT
11	Producers, consumers and decomposers, Energy flow in the ecosystem			Smart Board and PPT
12	Ecological Succession, Food Chains, food webs			Smart Board and PPT
13	Ecological pyramids. Introduction, types, characteristic features, structure			Smart Board and PPT
14	Function of Forest Ecosystem and Grassland Ecosystem			Smart Board and PPT
15	Function of Desert Ecosystem and Aquatic Ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)	Smart Board and PPT		
16	Biodiversity and its conservation: Introduction and its Definition	CO3		Smart Board and PPT
17	Genetic, species and ecosystem diversity. Biogeographical classification of India			Smart Board and PPT
18	Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values			Smart Board and PPT
19	Biodiversity of global, National and local levels. India as a mega-diversity nation			Smart Board and PPT

20	Hot spot of Biodiversity, Threats to biodiversity: Habitat loss, poaching of wild life		Assignment No.3	Smart Board and PPT		
21	Man-wildlife conflicts, Endangered and endemic species of India			Smart Board and PPT		
22	Conservation of Biodiversity- In situ and Ex-Situ conservation of biodiversity			Smart Board and PPT		
23	Environmental Pollution Definition: Cause, effects and control measures of (a) Air Pollution (b) Water Pollution			Smart Board and PPT		
24	Environmental Pollution Definition: Cause, effects and control measures of (c) Soil Pollution (d) Marine Pollution			Smart Board and PPT		
25	Environmental Pollution Definition: Cause, effects and control measures of (e) Noise Pollution (f) Thermal Pollution (g) Nuclear Hazards			Smart Board and PPT		
26	Solid waste management- cause, effects and control measures of urban and industrial wastes, Role of an individual in prevention of pollution			Smart Board and PPT		
27	Pollution case studies, Disaster management: floods, earthquake, cyclone and landslides			Smart Board and PPT		
28	Social Issues and the Environment: From unsustainable to sustainable development, Urban problems related to energy			CO4	Assignment No.4	Smart Board and PPT
29	Water conservation, rain water harvesting, watershed management					Smart Board and PPT
30	Resettlement and rehabilitation of people: Its problems and concerns					Smart Board and PPT
31	Case Studies: Environmental ethics-issues and possible solutions					
32	Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust					Smart Board and PPT
33	Wasteland Reclamation, Consumerism and waste products, Environment Protection Act, Air (Prevention and Control of Pollution) Act					Smart Board and PPT
34	Water (Prevention and Control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act	Smart Board and PPT				
35	Issues involved in enforcement of environmental legislation, Public Awareness	Smart Board and PPT				
36	Human population and the Environment, Population growth, variation among nations, Population Explosion-Family Welfare Programme	Smart Board and PPT				
37	Environment and human health. Human rights, Value Education, HIV/AIDS, Women and Child Welfare	Smart Board and PPT				
38	Role of Information Technology in Environment and Human Health, Case Studies, Drugs and their effects; Useful and harmful drugs	Smart Board and PPT				
39	Use and abuse of drugs, Stimulant and depression drugs, Concept of drug de-addiction, Legal position on drugs and laws related to drugs	Smart Board and PPT				