ES ASSIGNMENT QUESTIONS

SESSION PLAN

S.No.	Topics in JNTU syllabus	Modules and sub modules	Lecture No.	Suggested Books	Remarks
		UNIT – I			
1.	Ecosystems Concept of an ecosystem	Understanding of ecosystems Basic fundamentals of ecosystem	L1	T1-Ch3,R2Ch4	
2.	Structure and function of an ecosystem Producers consumers and decomposers	Structural aspects of ecosystem Biotic and abiotic components Ecosystem functions Energy and nutrient cycles evolution and diversity	L2	T1-Ch3,R2Ch4	
3.	Energy flow in the ecosystem	Lindemanns ten percent energy flow in the ecosystem	L3,4	T1-Ch3,R2Ch4	
4.	Ecological succession	Concept of succession Hydrarch and xerarch	L5	T1-Ch3,R2Ch4	
5.	Food chains Food webs and ecological pyramids	Food chain and food web pyramids of number biomass and energy	L6	T1-Ch3,R2Ch4	
6.	Introduction types Characteristic features Structure and function of the following ecosystems Forest ecosystem Grassland ecosystem Desert ecosystem Aquatic ecosystem (Ponds streams lakes rivers oceans estuaries)	Forest types in India Direct and indirect uses of forest products Types of grassland in India Uses of ecosystems Threats and conservation of ecosystems	L7,8,9	T1-Ch3,R2Ch4	
		UNIT – II			
5	Natural resources Renewable and nonrenewable resources	Introduction Earths resources and man Definition Forest water and food resources Energy and mineral resources	L10	T1-Ch2,R3Ch2	
6	Natural resources and associated problems	Use and misuse of natural resources Over exploitation and depletion of natural resources	L11	T1-Ch2,R3Ch2	
7	Water resources Use and over utilization of surface and ground water Floods Drought Conflicts over water Dams benefits and problems	Introduction Environment impact of exploitation of water resources Pollution of surface and groundwater Flood situation in India Causes and effects of floods and drought Inter state dispute over sharing of waters Advantages of dams Problems caused by dams	L12	T1-Ch2,R3Ch2	
8	Mineral resources	Classification and distribution of mineral	L13,14	T1-Ch2,R3Ch2	

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S.No.	Topics in JNTU syllabus	Modules and sub modules	Lecture No.	Suggested Books	Remarks
	Use and exploitation Environmental effects of extracting and using mineral resourcesCase study	resources Use and over exploitation Depletion of mineral resources Effects of mining on soil air vegetation and biota Displacement of people due to mining Sariska tiger reserve Rajasthan			
9	Energy resources Growing energy needs Renewable and nonrenewable energy sources Use of alternate energy source Case study	Introduction of energy resources Demand and supply of energy Hydropower solar energy wind energy geothermal energy Coal oil and natural gas Types of alternate energy sources Biogas production in rural sector	L15,16	T1-Ch2,R3Ch2	
10	Land resources Land as a resources Land degradation	Land as a resource Causes and effects of land degradation Control measures	L17	T1-Ch2,R3Ch2	
		UNIT – III			
11	Biodiversity and its conservation Introduction and definition Genetic Species and ecosystem diversity	Understand of biodiversity Concept of conservation Characteristic features of genetic, species and ecosystem biodiversity	L18,19	T1-Ch4,R6Ch1	
12	Bio geographical classification of India Value of biodiversity Consumptive use productive use Social ethical Aesthetic and option values	India's bio-geographic zones Concept of value of biodiversity Direct utilization of timber food, fuelwood and fodder Marketable goods Future possibilities of biodiversity use	L20	T1-Ch4,R6Ch4	
13	Biodiversity at global national and local levels India as a megadiversity nation	Biodiversity at global national and local levels Justification of India as a megadiversity nation	L21	T1-Ch4,R6Ch2	
14	Hot sports of biodiversity Threats to biodiversity	Criteria of a hot sport Global and Indian hot sports IUCN categories of threat	L22	T1-Ch4,R6Ch1	
15	Habitat loss Poaching of wildlife	Qualitative and quantitative habitat loss Causes and effects of poaching activity	L23	T1-Ch4,R6Ch5	
16	Man and wildlife conflicts Endangered and endemic species	Nature of conflicts Prevention and control of man and wildlife conflicts Common plant and animal species	L24	T1-Ch4,R6Ch5	
17	Conservation of biodiversity In situ and ex situ conservation	Concept of conservation Botanical gardens and zoological parks Sanctuaries and biological reserves Gene pools and gene banks	L25,26	T1-Ch4,R6Ch7	
18	Food resources	Introduction of food resources	L27	T1-Ch2,R3Ch2	

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S.No.	Topics in JNTU syllabus	Modules and sub modules	Lecture No.	Suggested Books	Remarks
	World food problems Changes caused by agriculture and overgrazing Effects of modern agriculture Fertilizer and pesticide problems Water logging and salinity Case study	Food scarcity and famine Alternate food sources Food security Environmental implications of using modern agricultural techniques Long term effects of overgrazing Excess use of fertilizers Problems with pesticide use Causes and effects of water logging and salinity			
19	Foddert resources Use and over exploitation Deforestation Case study	Types of foddert resources Use and misuse of forest resources Global and Indian scenario of Joint forest management	L28	T1-Ch2,R3Ch2	
UNIT – IV					
21	Environmental pollution Definition Cause Effects and control measures of Air pollution	Introduction of pollution Types of pollution Degradable and non-degradable pollutants Sources of air pollution Effects of air pollution on living organisms and material Ambient air quality standards and control measures	L29	T1-Ch5,R5Ch3	
22.	Water pollution Soil pollution	Sources and causes of water pollution control measures Environment impact of soil degradation Control of soil pollution	L30	T1-Ch5,RCh4	
23.	Marine pollution Noise pollution	Sources, causes and effects of marine pollution Oil slicks and control measures Effects of noise pollution on physical health Permitted noise levels Noise control techniques	L31	T1-Ch5,R5Ch5	
24.	Thermal pollution Nuclear hazards	Sources, causes and effects of thermal pollution Control measures Nuclear accidents and effects Remedial measures	L32	T1-Ch5,R8Ch3	
25.	Solid waste management causes Effects and control measures of urban and industrial wastes	Solid waste types Concept of solid waste management Sources and adverse effects of urban and industrial waste Source reduction and recycling and disposal of waste	L33	T1-Ch5,R8Ch3	
26.	Role of an individual in prevention of pollution NuclierPolution	Concept of disaster management From management to mitigation of disasters Main elements of mitigation strategy Different strategies of prevention of pollution Disasters and Impacts, Geneticaldisorders	L34	T1-Ch5,R8Ch3	

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S.No.	Topics in JNTU syllabus	Modules and sub modules	Lecture No.	Suggested Books	Remarks
27.	Pollution case studies	Groundwater pollution in India Pesticide pollution in India River pollution in India	L35	T1-Ch5,R9Ch6	
28.	Solid wastes e-wastes and its management	Types, collection processing desposal of industrial and municipal solid wastes composition .	L36	T1-Ch5,R9Ch6	
		UNIT – V			
29.	Green house effect Green house gases	Concept of green house Sources of green house gases	L37	T2-ch5	
30.	Climate change Global warming Acid rain	Introduction Man and environment Past and present changes in the environment Greenhouse effects and control measures Causes effects and control of acid rain	L38	T1-Ch6,R3Ch6	
31.	Ozone layer depletion Nuclear accidents and holocaust	Ozone umbrella Ozone hole Environment impact of ozone layer depletion Nuclear disasters and leakages Mitigation measures	L39	T1-Ch6,R3Ch6	
32.	Ozone depleting substances	Ozone depleting substances ODS Halaons, CFCS, CCl_4	L40	T2 – Ch5	
33.	Deforestation Desertification	Effects of deforestation Caususes of deforestation	L41	T2 – Ch5	
34	International protocols / conventions	Earth summit, Kyoto protocol, Montreal protocol	L36	T2 – Ch5	
		UNIT – VI			
35.	Environmental impact Assessment (EIA)	Definition of impact, classification of impacts methods of base line data acquisition	L42	T2-Ch6	
36.	Impact on different components Prediction of impacts	Human health resources air, water, flora, fauna and society Impact assessment methodologies Environmental impact statement (EIS)	L43	T2 – Ch6	
37.	Environmental management plan (EMP) Green belt development	Technological solutions, treatment technologies Green belt development Remote sensing and GIS method	L44	T2- ch6	
38	Water conservation Rain water harvesting Watershed management	Strategies of water conversation Saving water in agricultures Saving water in urban settings Techniques of rain water harvesting Concept and principles of watershed management	L45	T1-Ch6,R1Ch5	
39	Issues involved in enforcement of environmental legislation	Environment impact assessment Citizens actions and action groups Green movements Using an	L46	T1-Ch6,R7Ch3	

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S.No.	Topics in JNTU syllabus	Modules and sub modules	Lecture No.	Suggested Books	Remarks
	Public awareness	environmental calendar of activities			
		UNIT - VII			
40	National environment policy	Legal aspects air (Prevention and control of pollution) act - 1981 Powers and functions of the pollution control boards Penalties for violation of the act	L47	T2 – Ch6	
41	Environment protection act Water (Prevention and control of pollution)act - 1974	Introduction of environment protection act Main objectives of the act Powers and functions of the pollution control boards Penalties for violation of the act	L48	T1-Ch6,R5Ch5	
42	Forest conservation act	Introduction of environment protection act Main objectives of the act Powers and functions of the pollution control boards Penalties for violation of the act	L49	T2 – Ch6	
43	Municipal waste management causes Effects and control measures of urban and industrial wastes	Muncipal waste types Concept of solid waste management Sources and adverse effects of urban and industrial waste Source reduction and recycling and disposal of waste	L50	T1-Ch5,R8Ch3	
44	Hazardous waste management causes Effects and control measures of urban and industrial wastes Biomedical management causes Effects and control measures of urban and industrial wastes	Hazardous waste types Concept of solid waste management Sources and adverse effects of urban and industrial waste Source reduction and recycling and disposal of waste Biomedical waste types Concept of solid waste management Sources and adverse effects of urban and industrial waste Source reduction and recycling and disposal of waste	L51	T1-Ch5,R8Ch3	
		UNIT - VIII			
45	Social issues and environment From unsustainable to sustainable development Urban problems related to energy	Introduction Human population and environment Concept of sustainable development Energy efficiency and its problems	L53	T1-Ch6,R1Ch4	
46	Resettlement and rehabilitation of people its problems and concerns Case study Environmental ethics Issues and possible solutions	Problems and concerns of resettlement and rehabilitation of people The Tehri project Ethical basis of environment education Conservation ethics and traditional value systems of India	L54	T1-Ch6,R2Ch5	

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S.No.	Topics in JNTU syllabus	Modules and sub modules	Lecture No.	Suggested Books	Remarks
47	Consumerism and waste products Human population and the environment Population growth Variation among nations	Consumption patterns Reduction reutilization and recycling of waste products Study of relationship between human population and environment Global population growth Pattern of population growth	L55	T1-Ch6,R5Ch5 T1-Ch7, R1-Ch4	
48	Population explosion Family welfare programmes	Causes effects and control of population explosion Methods of sterilizations	L56	T1-Ch7,R1Ch4	
49	Concept of Sustainable Development, Crazy Consumerism Urban Sprwal Environmental education	Thereats to Sustainability Population and its explosion , Over- exploitation of resources, Stratagies for Achieving Sustainable development Conservation of Resources,	L57,58	T1-Ch7,R3Ch6	
50	Sustabaible Cities and Sustainable Communities Roll of IT in Environment Concept of Green Building	Human Health Environment ethics and economics, clean development Mechanism (CDM)	L59,60	T1-Ch7,R3Ch7	
51	Role of information technology in environment and human health Case study	Ecosystem modelling Computer technology that aid environment studies Karnataka's GIS scheme BhoomiConcept of Green building, clean development mechanism	L61	T1-Ch7R3-Ch7	

ASSIGNMENT QUESTIONS

UNIT -1

1.What is an eco system? explain about classes with examples?

2.What are strucrural components of Ecosystem?

3.what are functional aspects of Ecosystem?

4.Explain about energy flow in foodchain and What is food Web?

5.WhatBiomagnification and Bio concentration?

UNIT-2

1.What are renewable and nonrenewable resouresoures?

2.Discuss about energy resources?

3.How natural resources are replacing growing energy needs?

4.Explain about water resources and forms of water scientificaly?

5.Short notes on landresources?

UNIT-3

1.What is Biodiversity?explain about plant biodiversity?

2.What are Biodiversity Values?

3.What are conservation stratagies of MegaBiodiversity?

4.What is Insitu conservation method?

5.What is Exsitu conservation strategy?

6.What are HotSpots of Biodiversity& Locate them?

UNIT-4

1.What is pollution?Explain about different classes of pollution?

2.Explain about Air pollution and pollutants with examples?

3.What is Water pollution and How we need to conserve water?

4.What is land pollution?

ES ASSIGNMENT QUESTIONS

5.How noise pollution should control? and what are negative consiquences?

6. Short notes on Bhopal Gas Trazady?

UNIT-5

1.What is global warming?

2.Explain about Green House Effect? And greenhouse causing gases?

3.Eplain about ozone depletion?

4.What are ozone depleting substances?

5.What is KYOTO protocol?

6.What is Monetreal protocol?

UNIT-6

1.What is Environmental Impact assessment?

2.Explain about EIA classification?

3.What are values of EIA?

4.How EIA related to growing population?

5. Explain about role of EIA in developed?

UNIT-7

1.Explain about Air pollution Act?

2.Discuss about Water pollution Act?

3.How Environmental Act Supports to Environment?

4.Explain about Forest Protection Act?

5.Short Notes on Water Cess Act?

UNIT-8

1.What is Urban Sprwal?

2.what is sustainable Development?and Education role in development?

3.Explain about GIS?

ES ASSIGNMENT QUESTIONS

4. Discussion on GPS?

5.What is the role of IT in Environment