MARRI LAXMAN REDDY
Institute of Technology & Management
(Approved by AICTE, New Delhi & Affiliated JNTU, Hyderabad)
Dundigal, Quthbullapur (M), Hyderabad-500043.

Department of Electronics & Communication Engineering

II Year B.Tech. ECE I-Sem

ENVIRONMENTAL STUDIES

QUESTION BANK

Course Name : ENVIRONMENTAL SCIENCE AND TECHNOLOGY
Course Code : MC300ES
Class : II- B.Tech
Branch : ECE
Year : 2017– 2018
Course Faculty : Z.T. ANITHA KRUPANIDHI

OBJECTIVES:

1. Based on this course, the engineering graduate will understand /evaluate /develop technologies on the basis of ecological principles and environmental regulations which in turn help in sustainable development.
2. **GROUP - A (SHORT ANSWER QUESTIONS)**

UNIT – 1 ecosystem				
S. No.	**Question**	**Blooms Taxonomy Level**	**PO**	**Course Outcomes**
1.	Define ecology and ecosystem	Understanding	a,e,k,l	1
2.	Explain the importance of ecological pyramids	evaluating	a,e,k,l	1
3.	What is the Difference between food chain and food web.	Understanding	j,d	1
4.	Define biogeochemical cycles? Explain their importance.	Analysis	d,j	1
5.	List the climate & Endaomic factors in an ecosystem.	Understanding	d,j	1
6.	Explain about grassland ecosystem	Knowledge	a,e,d,j	1
7.	Explain few important characteristics of a forest ecosystem	Comprehension	a,e,l,k	1
8.	Explain about the tropic levels in any ecosystem	Evaluating	d,j	1
9.	Explain about the tropic levels in any ecosystem	Knowledge	d,j	1
10.	Briefly discuss an aquatic ecosystem.	Understanding	a,e	1

11.	Briefly discuss an terrestial ecosystem.	Understanding	a,e,k,l	1
12.	Define carrying capacity	Understanding	j,d	1
13.	Explain about types of food chains	Analysis	j,d	1
14.	Define pyramid of energy	Understanding	a,e	1
15.	Define ecological pyramids	Understanding	j,d	1
16.	List the A biotic components in an ecosystem.\	Knowledge	a,e	1
17.	List the biotic components in an ecosystem	Knowledge	j,d	1
18.	Define autotrophs/Producers	Understanding	a,e	1
19.	Define consumers in an ecosystem	Understanding	j,d	1
20.	Define decomposers?	Understanding	a,e	1

3. GROUP - B (LONG ANSWER QUESTIONS)

UNIT – 1 ecosystem				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outco**
1.	Explain about classification of eco system with a suitable examples.	Understanding	a,e,k,l	1
2.	What is the food chain & food wed ? Explain with neat sketch	evaluating	a,e,k,l	1
3.	Discuss about the energy flow in an eco system	Understanding	j,d	1
4.	Discuss about the energy flow in an eco system.	Analysis	d,j	1
5.	cycles Explain about Biogeochemical.	Understanding	d,j	1
6.	Explain about Hydrological cycle	Knowledge	a,e,d,j	1
7.	What is meant by Biomagnification ? Explain.	Comprehension	a,e,l,k	1
8.	What is meant by carrying capacity.	Evaluating	d,j	1
9.	Write notes on Ecosystem values and services	Knowledge	d,j	1
10.	What is the function of ecosystem	Understanding	a,e	1
11.	Write about Pond Ecosystem with diagram	Understanding	a,e,k,l	1
12.	Grassland Write about Ecosystem with diagram	Understanding	j,d	1
13.	Explain about structure of Ecosystem	Analysis	a,e	1
14.	Explain about energy pyramid with diagram	Understanding	a,e,k,l	1
15.	Explain about Biomass pyramid with diagram	Understanding	a,e	1
16.	Explain about Nitrogen with neat sketch	Knowledge	a,e,k,l	1

17.	Write short notes on (a)Producers (b) consumers	Knowledge	a,e	1
18.	What are the difference between Producers and consumers	Understanding	j,d	1
19.	Explain about Biomass & Number of Pyramid.	Understanding	a,e,k,l	1
20.	Write about Oxygen & Carbon Cycles.	Understanding	a,e	1

UNIT – 2

4. GROUP - A (SHORT ANSWER QUESTIONS)

1	Define natural resources	Understanding	j,d	1
2	Explain about natural resources	evaluating	a,e,k,l	1
3	Explain the causes for floods.	evaluating	j,d	1
4	Discuss the methods of flood control.		a,e,k,l	1
5	Define water resources	Understanding	j,d	1
6	Define forest resources	Understanding	a,e	1
7	What is the difference between surface and ground water	Understanding	a,e,k,l	1
8	Define mineral resources	Understanding	j,d	1
9	What are the effects of floods	Understanding	a,e	1
10	What are the effects of droughts	Understanding	j,d	1
11	Define soil erosion	Understanding	a,e,k,l	1
12	What are the effects of soil pollution	Understanding	j,d	1
13	List the different types of natural resources	evaluating	a,e,k,l	1
14	What is meant by bio gas	Understanding	a,e,k,l	1
15	What is meant by renewable resources	Understanding	a,e	1
16	What is meant by non renewable resources	Understanding	j,d	1
17	Define geo thermal energy	Understanding	a,e,k,l	1
18	Define hydro electrical energy	Understanding	j,d	1
19	What is the difference between renewable and non renewable resources	Understanding	a,e	1
20	Discuss the problems of over exploitation of ground water	Analysis	a,e,k,l	1

2.GROUP - B (LONG ANSWER QUESTIONS)

1	What are renewable and non renewable resources	Understanding	a,e,k,l	1
2	Discuss with the help of case study, how big dams have affected forests and tribals	Analysis	a,e	1
3	What is an aquifier? Discuss its types	Understanding	a,e,k,l	1
4	What are the environmental impacts of ground water usage	Understanding	j,d	1
5	Briefly discuss draughts and floods with respect to their occurrence and impacts	evaluating	a,e,k,l	1
6	Should we build big dams? Give arguments in favour of your answer	evaluating	j,d	1
7	What are the uses of various types of minerals	Understanding	j,d	1
8	Discuss the major environmental impacts of mineral extraction	Analysis	a,e,k,l	1
9	What are the uses of forest resources? explain	Understanding	j,d	1
10	What are the uses of mineral resources? Explain	Understanding	a,e,k,l	1
11	Explain about renewable energy resources	evaluating	j,d	1
12	Explain about non renewable energy resources	evaluating	j,d	1
13	What are solar cells? draw a diagram and enumerate its applications	Understanding	a,e,k,l	1
14	Discuss the merits and demerits of wind energy	Analysis	j,d	1
15	Comment upon the types of energy harnessed from the oceans	evaluating	a,e,k,l	1
16	What is bio gas? discuss the structure and function of bio gas plants	Understanding	j,d	1
17	What is soil erosion? How can it be checked	Understanding	a,e,k,l	1
18	What is land use/land cover mapping and its its use	Understanding	j,d	1
19	Explain about land degradation	evaluating	a,e,k,l	1
20	Explain about wind energy	evaluating	j,d	1

UNIT – 3 Biodiversity and Biotic resources				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcom**
1.	Define bio diversity	Analysis	a,e,k,l	1
2.	Write about classification of bio diversity	Understanding	a,e,k,l	1
3.	Define genetic bio diversity	Knowledge	j,d	1
4.	Define species bio diversity	Knowledge	d,j	1
5.	Define eco system bio diversity	Applying	d,j	1
6.	What is meant by consumptive use value	Knowledge	a,e,d,j	1
7.	What is meant by productive use values	Knowledge	a,e,l,k	1
8.	What is meant by social values	Evaluating	d,j	1
9.	What is meant by ethical values	Understanding	d,j	1
10.	Define western Ghats	Knowledge	a,e	1
11	Define eastern Himalaya	evaluating	a,e,k,l	1
12	What is meant by loss of habitat	evaluating	a,e	1
13	What are the man-wildlife conflicts	Understanding	a,e,k,l	1
14	What is meant by conservation of biodiversity	Understanding	a,e	1
15	What are the uses of timber and non timber products	Understanding	a,e,k,l	1
16	Write about about endangered species in India	Understanding	a,e	1
17	Explain about red data book in India	evaluating	a,e,k,l	1
18	Define aesthetic values	Understanding		1
19	What is meant by conservation of bio diversity	Understanding	a,e,k,l	1
20	Write about scientific names of plants	Understanding	a,e	1

	a) Rice b) Neem c) Ground nut			

5. GROUP - C (ANALYTICAL QUESTIONS)

UNIT – 3 Biodiversity and Biotic resources				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcomes**
1.	Define bio diversity. Explain about classification of bio diversity	Applying	a,e,k,l	1
2.	What are the major foder (food) resources of India	Applying	a,e,k,l	1
3.	What are the hot spots of bio diversity? Which are the hot spots found in India	create	j,d	1
4.	What do you meant by consumptive use and productive use values	Knowledge	d,j	1
5.	What do you mean by social and ethical values	Applying	d,j	1
6.	What are the timber and non timber forest resources	Knowledge	a,e,d,j	1
7.	What are the major threats to bio diversity	Understanding	a,e,l,k	1
8.	What are the major causes of man-wildlife conflicts?	Knowledge	d,j	1
9.	What is red data book? What do you mean by extinct endangered species of our country	Knowledge	d,j	1
10.	What is meant by in-situ and ex-situ conservation of bio diversity. Give examples	Knowledge	a,e	1
11	Explain about national parks and wild life sanctuaries	evaluating	a,e,k,l	1
12	Write about genetic and species bio diversity	evaluating		1
13	What are the importance of bio diversity	Understanding	a,e,k,l	1
14	Explain about bio diversity products	evaluating	a,e	1
15	Explain about eco system bio diversity	evaluating	a,e,k,l	1

6. GROUP - A (SHORT ANSWER QUESTIONS)

UNIT – 3 Biodiversity and Biotic resources				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcome**
1.	Define biodiversity	Understanding	a,e,k,l	1
2.	Explain genetic diversity, species diversity ecosystem diversity	evaluating	a,e,k,l	1
3.	What do your mean by consumptive use value, productive use value	Understanding	j,d	1
4.	social value, ethical value and option value of biodiversity	Analysis	d,j	1
5.	What are the major causes of man-wildlife conflicts	Understanding	d,j	1
6.	Define poaching of wild life	Knowledge	a,e,d,j	1
7.	What is Red Data Book ?	Comprehension	a,e,l,k	1
8.	What is meant by in situ conservation of biodiversity	Evaluating	d,j	1
9.	What ex-situ conservation of biodiversity ?	Knowledge	d,j	1
10.	What is meant by habitat loss	Understanding	a,e	1

7. GROUP - B (LONG ANSWER QUESTIONS)

UNIT – 3 Biodiversity and Biotic resources				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcom**
1.	Comment upon Indian biodiversity with special reference as a megadiversity nation.	Analysis	a,e,k,l	1
2.	What are the major threats to biodiversity	Understanding	a,e,k,l	1
3.	What is meant by in situ and ex-situ conservation of biodiversity ? Give examples	Knowledge	j,d	1
4.	(A)Name the types of plants for which gene sanctuaries in Indiaexist. (B) Name the animals for whose protection and conservations specific projects have been launched in our country.	Knowledge	d,j	1
5.	Find out the endangered species in india	Applying	d,j	1
6.	What is meant by Man wild life conflicts	Knowledge	a,e,d,j	1
7.	Explain the hot spots of biodiversity	Knowledge	a,e,l,k	1
8.	Explain the biodiversity values with examples	Evaluating	d,j	1
9.	Classification of biodiversity	Understanding	d,j	1

10.	What are the major causes of man-wildlife conflicts ? Discuss theremedial steps that can curb the conflict.	Knowledge	a,e	1

8. GROUP - C (ANALYTICAL QUESTIONS)

UNIT – 3 Biodiversity and Biotic resources				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcomes**
1.	Name the animals for whose protection and conservations specific projects have been launched in our country.	Applying	a,e,k,l	1
2.	What are hotspots of biodiversity ? Which are the hotspots found in India ? Discuss their salient features	Applying	a,e,k,l	1
3.	How can measured the Species diversity	create	j,d	1
4.	What do you mean by extinct, endangered, vulnerable and rare species	Knowledge	d,j	1
5.	Name the types of plants for which gene sanctuaries in India exist	Applying	d,j	1
6.	How many biodiversity hot spots in india	Knowledge	a,e,d,j	1
7.	Write five important biosphere reserves	Understanding	a,e,l,k	1
8.	Who is introduced biodiversity	Knowledge	d,j	1
9.	Name the any 2 plants are used to prepare drugs	Knowledge	d,j	1
10.	What is meant by habitat fragmentation	Knowledge	a,e	1

1. GROUP - A (SHORT ANSWER QUESTIONS)

UNIT – 4				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcome**
1.	Define pollution.	Knowledge	a,e,k,l	1
2.	. What are the natural and man made pollutants	Understanding	a,e,k,l	1
3.	. Give an account of indoor air pollution	Knowledge	j,d	1
4.	Explain about the noise pullution	Knowledge	d,j	1
5.	Write short notes on biomagnification	Analysis	d,j	1
6.	What is meant by B.O.D and C.O.D	Knowledge	a,e,d,j	1
7.	Short notes on water pollution	Understanding	a,e,l,k	1
8.	Short notes on air pollution.	Understanding	d,j	1
9.	What is meant by soil pollution	Understanding	d,j	1
10.	List the water pollution sources	Knowledge	a,e	1

2. GROUP - B (LONG ANSWER QUESTIONS)

UNIT –4				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcome**
1.	Give an account of the adverse effects of air pollution	Analysis	a,e,k,l	1
2.	. Briefly describe the sources, effects and control of noise pollution.	Applying	a,e,k,l	1
3.	Enumerate with examples the major sources of surface water pollution and ground water pollution.	Knowledge	j,d	1
4.	Discuss various sources of marine pollution. How can you prevent pollution of our oceans ?	evaluating	d,j	1
5.	Classify solid waste. What are the sources of urban and industrial solid wastes ?	Analysis	d,j	1
6.	What adverse effects can solid wastes cause ? How can the solid waste be managed.	Knowledge	a,e,d,j	1
7.	How can you, as an individual, prevent environmental pollution	Knowledge	a,e,l,k	1

3. GROUP - C (ANALYTICAL QUESTIONS)

UNIT – 4				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcom**
1.	.Sound pollution frequency expressed in	Knowledge	a,e,k,l	1
2.	Blue baby syndrome is caused by the presence of in drinking water.	Evaluating	a,e,k,l	1
3.	Minamata disease occurred due to consumption of fish contaminated with	Understanding	j,d	1
4.	Highest proportion in the vehicular exhaust	Knowledge	d,j	1
5.	Air pollutants affects plants by entering through	Analysis	d,j	1

1. GROUP - A (SHORT ANSWER QUESTIONS)

UNIT – 5				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcome**
1.	What do you mean by sustainable development	Knowledge	a,e,k,l	1
2.	. Discuss the measures to conserve water.	Knowledge	a,e,k,l	1
3.	What are greenhouse gases and greenhouse effect	Understanding	j,d	1
4.	What is meant by acid rain ? How does it form	Understanding	d,j	1
5.	Discuss the salient features of earth summit	Understanding	d,j	1
6.	What is meant by environmental impact assessment	Analysis	a,e,d,j	1
7.	Discuss the salient features of. Environmental(protection) act 1986	Knowledge	a,e,l,k	1
8.	What are the bio-medical wastes	Understanding	d,j	1
9.	What are the hazardous wastes	Knowledge	d,j	1
10.	Discuss about gloal warming	Understanding	a,e	1

2. GROUP - B (LONG ANSWER QUESTIONS)

UNIT – 5				
S. No.	**Question**	**Blooms Taxonomy Level**	**Program outcome**	**Course Outcom**
1.	Discuss the natural formation and occurrence of ozone in the stratosphere.	Analysis	a,e,k,l	1
2.	Discuss various measures for wasteland reclamation.	create	a,e,k,l	1
3.	Discuss the salient features of (a) Wildlife (Protection) Act, 1972. (b) Forest (Conservation Act), 1980.	Understanding	j,d	1
4.	What are the different methods to propagate environmental awareness in the socity	Knowledge	d,j	1
5.	What are the major limitations to successful implementation of our enviornmental legislation	evaluating	d,j	1
6.	Explain the muncipalsolid waste manage ment handling rules 2000 .	Analysis	a,e,d,j	1
7.	Why do we refer to Environmental Protection Act, 1986 as an Umbrella Act. Discuss the Major Environmental Protection Rules,1986.	Knowledge	a,e,l,k	1
8.	Population, consumerism and waste production are interrelated .Comment	Understanding	d,j	1
9.	Which are the agents responsible for ozone depletion ?	Analysis	d,j	1
10.	Explain the bio-medical waste manage ment handling rules	Knowledge	a,e	1