



**SCHEDULE OF INSTRUCTIONS**  
**UNIT PLAN**

Academic Year : 2012-2013  
Semester : I UNIT NO.: .....1.....  
Name of the Program: B.Tech .....Biotechnology..... Year: 1 Section: A

Course/Subject: ...Environmenta science..... Course Code: ...GR11A1009.....

Name of the Faculty: ...Srilakshmi.....Dept.: Basic Science.....

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	Objectives Nos	Outcomes Nos.	References (Text Book, Journal...) Page Nos.: ____to ____
1.	19/9/12	1	Introduction			
2.	19/9/12	1	Introduction	1	1	
3.	20/9/12	1	Introduction about Environmental science	3	3	Environmental sciences by Barucha
4.	20/9/12	1	Definition, scope of ecosystem	3	3	Environmental sciences by Barucha
5.	26/10/12	1	Concept, classification, structure of ecosystem	4	4	Environmental sciences by Barucha
6.	26/10/12	1	public participation and awareness	4	4	Environmental sciences by Barucha
7.	27/10/12	1	Components, function of ecosystem	3	3	Environmental sciences by Barucha
8.	3/10/12	1	Biodiversity-types and values	3	2	Environmental sciences by Barucha
9.	3/10/12	1	Biodiversity- values	2	2	Environmental sciences by Barucha
10.	4/10/12	1	Conservation of diversity species	2	2	Environmental sciences by Barucha

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:

- Note:
1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
  2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED IN BOLD
  3. MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.



**SCHEDULE OF INSTRUCTIONS**  
**UNIT PLAN**

Academic Year : 2012-2013  
Semester : I UNIT NO.: .....2.....  
Name of the Program: B.Tech .....Biotechnology..... Year: .....1... Section: A  
Course/Subject: ...Environmenta science..... Course Code: ...GR11A1009.....

Name of the Faculty: ...Srilakshmi.....Dept.: Basic Science.....  
Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	Objectives Nos.	Outcomes Nos.	References (Text Book, Journal...) Page Nos.: ____to ____
1.	10/10/12	1	Definition, occurrence resources	4	4	Environmental sciences by Barucha and Anji reddy
2.	10/10/12	1	classification of natural resources	4	4	Environmental sciences by Barucha and Anji reddy
3.	11/10/12	1	Positive and negative impacts of water resources ,Forest resources	3	3	Environmental sciences by Barucha
4.	11/10/12	1	mineral resources	3	3	Environmental sciences by Barucha Anji reddy
5.	17/10/12	1	Forest resources	4	4	Environmental sciences by Barucha Anji reddy
6.	17/10/12	1	Land resources	4	4	Environmental sciences by Barucha
7.	18/10/12	1	Energy resources	3	2	Environmental sciences by Barucha and Anji reddy
8.	18/10/12	1	Renewable resources	2	2	Environmental sciences by Barucha and Anji reddy
9.	25/10/12	1	Non-Renewable resources	2	2	Environmental sciences by Barucha and Anji reddy
10.	31/10/12	1	Role of individual in conservation of natural resources	2	2	Environmental sciences by Barucha and Anji reddy

Signature of HOD

Date:

- Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.  
2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED IN BOLD  
3. MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

Srilakshmi

Signature of faculty

Date:



**SCHEDULE OF INSTRUCTIONS**  
**UNIT PLAN**

Academic Year : 2012-2013  
Semester : I UNIT NO.: .....3.....  
Name of the Program: B.Tech .....Biotechnology..... Year: 1. Section: A  
Course/Subject: ...Environmenta science..... Course Code: ...GR11A1009.....

Name of the Faculty: ...Srilakshmi.....Dept.: Basic Science.....  
Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	Objectives Nos.	Outcomes Nos.	References (Text Book, Journal...) Page Nos.: ____to ____
1.	1/11/12	1	Definition, types of pollutants	4	4	Environmental sciences by Barucha and Anji reddy Anubha kaushik
2.	1/11/12	1	classification of pollution,	3	3	Environmental sciences by Barucha and Anji reddy
3.	7/11/12	1	Causes, effects and control of air pollution	3	3	Environmental sciences by Barucha, Anubha kaushik
4.	7/11/12	1	Causes, effects and control of water pollution	3	3	Environmental sciences by Barucha Anji reddy
5.	8/11/12	1	Causes, effects and control of marine	3	3	Environmental sciences by Barucha Anji reddy
6.	8/11/12	1	Causes, effects and control of noise pollution	3	3	Environmental sciences by Barucha, kaushik
7.	14/11/12	1	effects and control of thermal pollution	3	3	Environmental sciences by Barucha, kaushik
8.	14/11/12	1	effects and control of nuclear pollution	3	3	Environmental sciences by Barucha, kaushik
9.	21/11/12	1	effects and control of soil pollution	3	3	Environmental sciences by Barucha, kaushik
10.	22/11/12	1	Occupational hazards	3	3	Environmental sciences by Barucha, kaushik

Signature of HOD

Date:

- Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.  
2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED IN BOLD  
3. MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.

Srilakshmi

Signature of faculty

Date:



## SCHEDULE OF INSTRUCTIONS UNIT PLAN

Academic Year : 2012-2013  
Semester : I UNIT NO.: .....4.....  
Name of the Program: B.Tech .....Biotechnology..... Year: 1 Section: A  
Course/Subject: ...Environmenta science..... Course Code: ...GR11A1009.....  
Name of the Faculty: ...Srilakshmi.....Dept.: Basic Science.....  
Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	Objectives Nos.	Outcomes Nos.	References (Text Book, Journal...) Page Nos.: ____to ____
1.	28/11/12	1	Types, cause of natural disasters, global warming	4	4	Environmental sciences by Barucha and Anji reddy Anubha kaushik
2.	28/11/12	1	effects of natural disasters	3	3	Environmental sciences by Barucha and Anji reddy
3.	29/12/12	1	global warming	2	2	Environmental sciences by Barucha, Anubha kaushik
4.	29/12/12	1	Ozone layer- role, location and degradation	3	3	Environmental sciences by Barucha Anji reddy Anubha kaushik
5.	5/12/12	1	Deforestation	2	2	Environmental sciences by Barucha Anji reddy
6.	5/12/12	1	desertification	3	3	Environmental sciences by Barucha, kaushik
7.	6/12/12	1	Technological solutions, preventive methods	3	3	Environmental sciences by Barucha and Anji reddy Anubha kaushik
8.	6/12/12	1	control techniques	3	3	Environmental sciences by Barucha, kaushik
9.	12/12/12	1	Green belt development, rain water harvesting	3	3	Environmental sciences by Barucha, kaushik
10.	19/12/12	1	Renewable resources, Alternate resources	3	3	Environmental sciences by Barucha, kaushik

Signature of HOD  
Date:

Srilakshmi  
Signature of faculty  
Date:

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.  
2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED IN BOLD



## Gokaraju Rangaraju Institute of Engineering and Technology

(Autonomous)

Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

### SCHEDULE OF INSTRUCTIONS UNIT PLAN

Academic Year : 2012-2013

Semester : I

UNIT NO.: .....5.....

Name of the Program: B.Tech .....Biotechnology..... Year: 1 Section: A

Course/Subject: ...Environmenta science..... Course Code: ...GR11A1009.....

Name of the Faculty: ...Srilakshmi.....Dept.: Basic Science.....

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	Objectives Nos.	Outcomes Nos.	References (Text Book, Journal...) Page Nos.: ____to ____
1.	20/21/12	1	pollution prevention act	4	4&4	Environmental sciences by Barucha and Anji reddy Anubha kaushik
2.	20/12/12	1	Air ,water pollution act	3	3&3	Environmental sciences by Barucha and Anji reddy
3.	26/12/12	1	water pollution	3	3&3	Environmental sciences by Barucha, Anubha kaushik Anji reddy
4.	26/1/13	1	wild life protection act environmental ethics and economics	3	3&3	Environmental sciences by Barucha Anji reddy Anubha kaushik
5.	27/1/13	1	Forest conservation Municipal solid waste Causes, threats to sustainability	2	2&2	Environmental sciences by Barucha Anji reddy
6.	2/1/13	1	biomedical waste, hazardous waste handling act	2	2&2	Environmental sciences by Barucha, kaushik
7.	3/1/13	1	Role of IT in environment,	2	2&2	Environmental sciences by Barucha and Anji reddy Anubha kaushik
8.	9/1/13	1	environmental ethics, environmental economics	2	2	Environmental sciences by Barucha and Anji reddy Anubha kaushik
9.	10/1/13	1	Concept of green building	2	2	Environmental sciences by Barucha and Anji reddy Anubha kaushik

10.	10/1/13	1	Clean development mechanism	2	2	Environmental sciences by Barucha and Anji reddy Anubha kaushik
-----	---------	---	-----------------------------	---	---	--

Srilakshmi

Signature of HOD

Signature of faculty

Date:

Date:

Note:

1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED IN BOLD
3. MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC



**TUTORIAL SHEET - 1**

Academic Year : 2012-2013 Date:25/10/12.

Semester : I

Name of the Program: B.Tech ..... Biotechnology..... Year: .....1.... Section: A

Course/Subject: Environmental science.....

Name of the Faculty: .....Srilakshmi..... Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....1

Q1. What are the different components of ecosystem?

Q2. Define food chain and food web? Give their significance.

Q3. What is biogeochemical cycle? Explain about nitrogen cycle with a neat diagram.

Q4. What is hot-spot of diversity? What are the consumptive, social and productive values of biodiversity?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 4,

1. To develop insight about environment 2) ecology3) classification and function of ecosystem and 4)biodiversity

Outcome Nos.:4...1) They understand about environment 2) concept of ecosystem  
3) Biodiversity 4) values and types of biodiversity.

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**TUTORIAL SHEET - 2**

Academic Year : 2012-2013

Date: 5/11/12

Semester : I

Name of the Program: B.Tech ..... Biotechnology ..... Year: .....1..... Section: A

Course/Subject: Environmental science

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....2.....

Q1. What are the effects of over utilization of ground water?

Q2. Define renewable and non-renewable resources with example.

Q3. What are mineral resources? Elaborate the impacts of mining?

Q4. What is the role of individual in conservation of natural resources?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 4,

1. To develop insight about the role of individual in conservation of resources
- 2) impacts of mining
2. 3) impacts of excess usage of water and
- 4) forest and wild life protection

Outcome Nos.:4...1) They understand about the importance of resources 2) impacts of mining  
3) Importance of water 4) forest and wild life protection

Srilakshmi

Signature of HOD

Signature of faculty

Date:

Date:





**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**TUTORIAL SHEET - 3**

Academic Year : 2012-2013

Date:10/11/12

Semester : I

Name of the Program: B.Tech ..... Biotechnology..... Year: .....1..... Section: A

Course/Subject: Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....3.....

Q1. What are the adverse effects of air pollution?

Q2.How does noise effect human health?

Q3. Define thermal pollution and describe its effects.

Q4. Discuss the adverse effects of water pollution?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 4,

1. Gained knowledge about different types of pollutions
- 2) agents which cause pollution
- 3) Classification of pollutants
- 4) causes, effects and control of pollution

Outcome Nos.:4...1) They understand about the impacts of environmental pollution 2) causes of pollution 3) effects of pollution 4) effects of pollution

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**TUTORIAL SHEET - 4**

Academic Year : 2012-2013 Date: 20/12/12

Semester : I

Name of the Program: B.Tech ..... Biotechnology..... Year: .....1..... Section: A

Course/Subject: Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....4.....

Q1. Describe the role of ozone layer, why it is so important and a cause of worry for all the people?

Q2. What are greenhouse gases and greenhouse effect?

Q3. What is rain water harvesting and write their importance at the present day?

Q4. Name the different types of natural disasters and discuss in brief about them.

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 3,

1. To develop knowledge in ozone layer 2) climate change 3) rain water harvesting

Outcome Nos.:4...1) They understand about the environmental problems 2) importance of rain water harvesting 3) impacts of depletion of ozone layer 4) climate change

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**TUTORIAL SHEET - 5**

Academic Year : 2012-2013 Date: ...03/1/13

Semester : I

Name of the Program: B.Tech ..... Biotechnology..... Year: .....1..... Section: A

Course/Subject: Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....5.....

Q1. Define sustainable development? Why it is necessary?

Q2. Discuss about the concept of green buildings, why it is becoming very popular now a days?

Q3. Discuss the role of IT specifically in environment protection?

Q4. What are the basic principles of natural environmental policy?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 3,1.To develop knowledge in about environment protection 2) Disposable methods of various waste materials 3) concept of green building and role of IT in environment.

Outcome Nos.:3...1) They understand about the environment protection 2) Disposable methods 3) concept of green building

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



## **LESSON PLAN**

Academic Year : 2012-2013 Date: 1/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(3)..... 1..... Duration of Lesson: 1hrs.....

Lesson Title: definition of pollution, Classification of pollution

Classification of pollution

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1 To understand about definition of pollution
2. Classification of pollution

TEACHING AIDS : White board teaching

TEACHING POINTS :

What is pollution  
Different types of pollution

Assignment / Questions:

- Q1.What is meant by pollution?
- Q2.What are the different types of pollution

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.4&4



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

## LESSON PLAN

Academic Year : 2012-2013

Date: 1/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(3)..... 2..... Duration of Lesson: 1hrs.....

Lesson Title: classification of pollutants

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

To understand about classification of pollutants

TEACHING AIDS : White board teaching

TEACHING POINTS :

Different types Physical, chemical and biological pollutants present in environment

Assignment / Questions:

Q1.How pollutants are classified?

Q2.What are the Physical, chemical and biological pollutants present in environment?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



## **LESSON PLAN**

Academic Year : 2012-2013 Date: 7/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(3)..... 3..... Duration of Lesson: 1hrs.....

Lesson Title: air pollution

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1 To understand about classification of air pollutants
2. Causes of air pollution

TEACHING AIDS : White board teaching

TEACHING POINTS :

Classification of air pollutants

Causes of air pollution

Assignment / Questions:

- Q1.How air pollutants are classified?
- Q2.What are the causes of air pollution?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**LESSON PLAN**

Academic Year : 2012-2013

Date: 7/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(3)..... 4..... Duration of Lesson: 1hrs.....

Lesson Title: air pollution

**INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

- 1 To understand about effects of air pollution
2. Control of air pollution

TEACHING AIDS : White board teaching

TEACHING POINTS :

Effects of air pollution

Control of air pollution

Assignment / Questions:

- Q1.What are the major impacts of air pollution?
- Q2.What are the control measures of air pollution?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



## **LESSON PLAN**

Academic Year : 2012-2013 Date: 8/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(3)..... 5..... Duration of Lesson: 1hrs.....

Lesson Title: water pollution

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1 To understand about causes of water pollution
2. Effects of water pollution

TEACHING AIDS : White board teaching

TEACHING POINTS :

Causes of water pollution

Effects of water pollution

Assignment / Questions:

- Q1.What are the major impacts of air pollution?
- Q2.Write briefly about causes of air pollution?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3





**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**LESSON PLAN**

Academic Year : 2012-2013

Date: 8/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(3)..... 6..... Duration of Lesson: 1hrs.....

Lesson Title: water pollution

**INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

- 1 To understand about control of water pollution
- 2 Effects of water pollution

TEACHING AIDS : White board teaching

TEACHING POINTS :

Control of water pollution.

Effects of water pollution

Assignment / Questions:

- Q1.Discuss about adverse effects of water pollution and what techniques can be applied to control it, discuss using a pollution source.
- Q2.Give a short note on sewage treatment method?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

## LESSON PLAN

Academic Year : 2012-2013 Date: 14/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(3)..... 8..... Duration of Lesson: 1hrs.....

Lesson Title: marine pollution

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1 To understand about effects of marine pollution
2. Control of marine pollution

TEACHING AIDS : White board teaching

TEACHING POINTS :

Effects of marine pollution

Control of marine pollution

Assignment / Questions:

- Q1.Briefly discuss about the control measures of marine pollution?
- Q2.Mention few adverse effects of marine pollution?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



## **LESSON PLAN**

Academic Year : 2012-2013 Date: 21/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(3)..... 9..... Duration of Lesson: 1hrs.....

Lesson Title: noise and thermal pollution

### **INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

- 1 To understand about sources, effects and Control of noise pollution
2. Sources, effects and control of thermal pollution

TEACHING AIDS : White board teaching

TEACHING POINTS :

sources, effects and Control of noise pollution

sources, effects and control of thermal pollution

Assignment / Questions:

Q1.Briefly discuss about the sources, effects and control of noise pollution?

Q2.Discuss briefly discuss about the sources, effects and control of noise pollution?

Srilakshmi

Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**LESSON PLAN**

Academic Year : 2012-2013 Date: 22/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(3)..... 10..... Duration of Lesson: 1hrs.....

Lesson Title: Nuclear pollution

**INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

- 1 To understand about sources, effects nuclear pollution
2. Control of nuclear pollution

TEACHING AIDS : White board teaching

TEACHING POINTS :

sources, effects nuclear pollution

control of thermal pollution

Assignment / Questions:

Q1.What are the adverse effects and control of nuclear pollution?

Q2.Discuss briefly discuss about the sources of nuclear pollution and how they lead to pollution of the ecosystem?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



## LESSON PLAN

Academic Year : 2012-2013 Date: 28/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4)..... 1..... Duration of Lesson: 1hrs.....

Lesson Title: Natural disasters and global warming

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1 To understand the effects of natural disasters
2. Global warming

TEACHING AIDS : Black board teaching

TEACHING POINTS :

Global warming  
Natural disasters and their effects

Assignment / Questions:

- Q1.What is meant by Disaster? What are the different types of disasters?
- Q2.What is global warming what is contributing to this global phenomenon?
- Q3.What is the definition of flood? What causes flood?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&4



## LESSON PLAN

Academic Year : 2012-2013 Date: 28/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4)..... 2..... Duration of Lesson: 1hrs.....

Lesson Title: Global warming and climate change

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1 To understand about climate change
2. Global warming

TEACHING AIDS : White board teaching

TEACHING POINTS :

1. Climate change
2. Effects of global warming

Assignment / Questions:

- Q1. Differentiate climatic change?
- Q2. What are the effect of change in climate

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&4



## LESSON PLAN

Academic Year : 2012-2013 Date: 29/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4)..... 3..... Duration of Lesson: 1hrs.....

Lesson Title: Ozone layer-role and effects

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1 To understand about importance of ozone layer
2. Effects of depletion of ozone layer
3. Role of ozone layer

TEACHING AIDS : White board and Marker

TEACHING POINTS :

Role of ozone layer  
Effects of depletion of ozone layer  
importance of ozone layer

Assignment / Questions:

- Q1. Describe the role of ozone layer, why it is so important and a cause of worry for all the people?
- Q2. What is the importance of ozone layer?
- Q3. Effects of ozone depletion?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&4



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**LESSON PLAN**

Academic Year : 2012-2013 Date: 29/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4)..... 4..... Duration of Lesson: 1hrs.....

Lesson Title: Formation of ozone layer and ozone depleting substances

**INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

1 To understand about formation of ozone layer

2. Ozone depleting substances

TEACHING AIDS : White board teaching

TEACHING POINTS :

How ozone is formed?

Substances that deplete the ozone layer?

Assignment / Questions:

Q1. How is the ozone layer formed? Explain with suitable chemical reactions.

Q2. What are ozone depleting substances?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&4





## LESSON PLAN

Academic Year : 2012-2013 Date: ...5/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....5..... Duration of Lesson: 1hrs.....

Lesson Title: Deforestation

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Gained knowledge about deforestation
2. Causes
3. Effects of deforestation

4. Role of IT in environment protection

TEACHING AIDS : White board teaching

TEACHING POINTS :

Deforestation  
Causes and effects.

Assignment / Questions:

Q1. What is deforestation? What are the processes by which this can take place?

Q2. Using one process of deforestation, explain the ultimate consequences.

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



## LESSON PLAN

Academic Year : 2012-2013 Date: ...5/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....6..... Duration of Lesson: 1hrs.....

Lesson Title: Desertification

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about Desertification
2. Causes
3. Effects of Desertification

TEACHING AIDS : White board teaching

TEACHING POINTS :

Desertification  
Causes and Effects of Desertification

Assignment / Questions:

- Q1. What is desertification? What are the processes by which this can take place?
- Q2. What are the mechanisms which lead to desertification?
- Q3. What are the effects of desertification?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



## **LESSON PLAN**

Academic Year : 2012-2013 Date: ...6/11/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....7..... Duration of Lesson: 1hrs.....

Lesson Title: Technological solutions, preventive methods, control techniques

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about Technological solutions
2. Preventive methods

TEACHING AIDS : White board teaching

TEACHING POINTS :

Technological solutions about environmental impacts

Preventive methods

Assignment / Questions:

Q1. What is EIA? Draw a flow chart of EIA methodology?

Q2 What are the Technological solutions to prevent the environmental impacts

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



## LESSON PLAN

Academic Year : 2012-2013 Date: ...6/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....8..... Duration of Lesson: 1hrs.....

Lesson Title: Technological solutions, preventive methods, control techniques

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about control techniques about environmental impacts

TEACHING AIDS : White board teaching

TEACHING POINTS :

Different Control techniques about environmental impacts

Assignment / Questions:

- Q1. What are the control techniques to reduce the impacts?
- Q2. What are the goals of environmental impact assessment?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**LESSON PLAN**

Academic Year : 2012-2013 Date: ...12/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....9..... Duration of Lesson: 1hrs.....

Lesson Title: Green belt development

**INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

1. Understand about Green belt.
2. Importance of green belt development

TEACHING AIDS : White board teaching

TEACHING POINTS :

What is green belt?  
What is its importance in the present day?

Assignment / Questions:

- Q1. What is Green belt development?
- Q2. What is the advantages and disadvantages of Green belt development?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



## LESSON PLAN

Academic Year : 2012-2013 Date: ...12/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....10..... Duration of Lesson: 1hrs.....

Lesson Title: Rain water harvesting

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about Rain water harvesting methods
2. Importance and methods

TEACHING AIDS : White board teaching

TEACHING POINTS :

TEACHING POINTS :

Rain water harvesting methods  
Importance and methods

Assignment / Questions:

Q1. What is Rain water harvesting? Explain with diagram.

Q2.What are the advantages rain water harvesting?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

## LESSON PLAN

Academic Year : 2012-2013 Date: ...13/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....11..... Duration of Lesson: 1hrs.....

Lesson Title: Renewable resources

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about renewable resources
2. Importance of renewable resources

TEACHING AIDS : White board teaching

TEACHING POINTS :

- |   |
|---|
| <ol style="list-style-type: none"><li>1. about renewable resources</li><li>2. Importance of renewable resources</li></ol> |
|---|

Assignment / Questions:

- Q1.Discuss the renewable resources available for humanity that are ecofriendly.  
Q2.Importance of renewable resources.

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

## LESSON PLAN

Academic Year : 2012-2013 Date: ...13/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....12..... Duration of Lesson: 1hrs.....

Lesson Title: Renewable resources

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about renewable resources
2. Importance of renewable resources

TEACHING AIDS : White board teaching

TEACHING POINTS :

1. renewable resources
2. Importance of renewable resources

Assignment / Questions:

Q1.Uses of renewable resources

Q2.What is the need of Preservation of renewable resources.

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3





**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

## LESSON PLAN

Academic Year : 2012-2013 Date: ...19/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....13..... Duration of Lesson: 1hrs.....

Lesson Title: Alternate resources

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about alternate renewable resources
2. Importance of alternate renewable resources

TEACHING AIDS : White board teaching

TEACHING POINTS :

Assignment / Questions:

Q1.Uses of alternate renewable resources

Q2.What is the need of Preservation of alternate renewable resources.

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

## LESSON PLAN

Academic Year : 2012-2013 Date: ...19/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(4).....14..... Duration of Lesson: 1hrs.....

Lesson Title: Alternate resources

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about alternate renewable resources
2. Importance of alternate renewable resources

TEACHING AIDS : White board teaching

TEACHING POINTS :

1. alternate renewable resources
2. Importance of alternate renewable resources

Assignment / Questions:

- Q1.Discuss the alternate resources available for humanity that are ecofriendly.
- Q2.Importance of alternate resource

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

## LESSON PLAN

Academic Year : 2012-2013 Date: ...20/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....1..... Duration of Lesson: 1hrs.....

Lesson Title: Pollution Act

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about pollution Act
2. Water and air pollution Act

TEACHING AIDS : White board teaching

TEACHING POINTS :

pollution Act  
Water and air pollution Act

Assignment / Questions:

- Q1.Discuss the salient features of environment (protection) Act, 1986.
- Q2. .Discuss the salient features of environment (protection) Act, 1981

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

## **LESSON PLAN**

Academic Year : 2012-2013 Date: ...26/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....2..... Duration of Lesson: 1hrs.....

Lesson Title: Conservation Act

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about Forest conservation Act
2. Wild life protection Act

TEACHING AIDS : White board teaching

TEACHING POINTS :

Forest conservation Act  
Wild life protection Act

Assignment / Questions:

- Q1. What re the major provisions in the Forest Act 1980?
- Q2. Discuss the salient features of wild life (protection) ?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

## LESSON PLAN

Academic Year : 2012-2013 Date: ...27/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....3..... Duration of Lesson: 1hrs.....

Lesson Title: Disposable methods

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about collection of different waste materials
2. Safety measures.

TEACHING AIDS : White board teaching

TEACHING POINTS :

Rain water harvesting methods  
Importance and methods

Assignment / Questions:

- Q1. What are hazardous wastes? Discuss the rules to manage and handle them?
- Q2. What are bio-medical wastes? Discuss the rules to manage and handle them?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**LESSON PLAN**

Academic Year : 2012-2013 Date: ...27/12/12

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....4..... Duration of Lesson: 1hrs.....

Lesson Title: Disposable methods

**INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

1. Understand about collection of different waste materials
2. Safety measures

TEACHING AIDS : White board teaching

TEACHING POINTS :

Disposable methods collection of different waste materials Safety measures
--

Assignment / Questions:

- Q1. What are municipal wastes? Discuss the rules to manage and handle them?
- Q2. What are bio-medical wastes? Discuss the rules to manage and handle them?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**LESSON PLAN**

Academic Year : 2012-2013 Date: ...2/1/13

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....5..... Duration of Lesson: 1hrs.....

Lesson Title: Role of information technology in environment

**INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

1. Understand about Role of information technology in environment
2. Data base on environment

TEACHING AIDS : White board teaching

TEACHING POINTS :

Role of information technology in environment  
importance of environmental education

Assignment / Questions:

- Q1. Discuss about role of information technology in environment protection?
- Q2. What is the importance of environmental education?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**LESSON PLAN**

Academic Year : 2012-2013 Date: ...2/1/13

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....6..... Duration of Lesson: 1hrs.....

Lesson Title: Environmental ethics and economics

**INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

1. Understand about Environmental ethics
2. Environmental economics

TEACHING AIDS : White board teaching

TEACHING POINTS :

Environmental ethics and economics

Assignment / Questions:

- Q1. What do you understand by Environmental Economics?
- Q2. What is the importance of environmental education?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3





**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**LESSON PLAN**

Academic Year : 2012-2013 Date: ...3/1/13

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....7..... Duration of Lesson: 1hrs.....

Lesson Title: Sustainability

**INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

1. Understand about Sustainability
2. Causes to Sustainability

TEACHING AIDS : White board teaching

TEACHING POINTS :

Sustainability  
Causes to Sustainability

Assignment / Questions:

- Q1. How can we see our current society to be sustainable, discuss the strategies.
- Q2. What causes Sustainability

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



## LESSON PLAN

Academic Year : 2012-2013 Date: ...3/1/13  
Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....8..... Duration of Lesson: 1hrs.....

Lesson Title: Sustainability

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about Sustainability
2. Threats to Sustainability

TEACHING AIDS : White board teaching

TEACHING POINTS :

Sustainability  
Threats to Sustainability

Assignment / Questions:

- Q1. How can we see our current society to be sustainable, discuss the strategies?
- Q2. What are the threats facing sustainable development in the current period, explain.

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

## LESSON PLAN

Academic Year : 2012-2013 Date: ...9/1/13

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....9..... Duration of Lesson: 1hrs.....

Lesson Title: Green building

### INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Understand about Green building
2. Rating of Green building

TEACHING AIDS : White board teaching

TEACHING POINTS :

Green building  
Rating of Green building

Assignment / Questions:

- Q1. Discuss the basic characteristics of green buildings.
- Q2. Discuss about the concept of green buildings, why it is becoming very popular no a days?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

## **LESSON PLAN**

Academic Year : 2012-2013 Date: ...10/1/13

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: .....1..... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GRA11009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Lesson No: .....Unit(5).....10..... Duration of Lesson: 1hrs.....

Lesson Title: Clean development mechanism

### **INSTRUCTIONAL/LESSON OBJECTIVES:**

On completion of this lesson the student shall be able to:

1. Understand about Clean development mechanism
2. Objectives of Clean development mechanism

TEACHING AIDS : White board teaching

TEACHING POINTS :

Clean development mechanism  
Objectives of Clean development mechanism

Assignment / Questions:

Q1. Discuss about Clean development mechanism and their objectives?

Q2. How does Clean development mechanism benefit the third world countries while helping keep the environment under control globally?

Srilakshmi  
Signature of faculty

Note: Mention for each question the relevant Objectives and Outcomes Nos.3&3



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

## COURSE SCHEDULE

Academic Year : 2012-2013

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: 1... Section: A

Course/Subject: ...Environmental science..... Course Code: ...GR11A1009.....

Name of the Faculty: ...Srilakshmi..... Dept.: Basic science.

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

The Schedule for the whole Course / Subject is:

S. No.	Description	Duration (Date)		Total No. Of Periods
		From	To	
1.	Unit-1:Ecology	19/9/10	4/10/12	12
2.	Unit-2 : Natural resources	10/10/12	31/10/12	12
3.	Unit-3: Environmental pollution	1/11/12	22/11/12	12
4.	Unit-4: Environmental problems and Management policies	28/11/12	19/12/12	14
5.	Unit-5: National policy on Environment protection and sustainability	20/12/12	10/1/13	14
6.				

Total No. of Instructional periods available for the course: .....68..... Hours / Periods



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**SCHEDULE OF INSTRUCTIONS**  
**COURSE PLAN**

Academic Year : 2012-2013  
Semester : I UNIT NO.: 5.....  
Name of the Program: B.Tech Biotechnology... Year: ...1... Section: A

Course/Subject: ...Environmental science..... Course Code: GR11A1009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Unit No.	Lesson No.	Date	No. of Periods	Topics / Sub-Topics	Objectives	Outcomes Nos.	References (Text Book, Journal...) Page Nos.: _____ to _____
1.	1.	20/21/12	1	pollution prevention act	4	4	Barucha and Anji reddy Anubha kaushik
2.	2.	20/12/12	1	Air ,water pollution prevention act	3	3	Barucha and Anji reddy
3.	3.	21/12/12	1	Forest conservation, wild life protection act	3	3	Barucha, Anubha kaushik Anji reddy
4.	4.	21/1/13	1	Municipal solid waste, biomedical waste	3	3	Barucha Anji reddy Anubha kaushik
5.	5.	27/1/13	1	hazardous waste handling act	2	2	Barucha Anji reddy
6.	6.	27/1/13	1	Role of IT in environment	2	2	Barucha, kaushik
7	7.	2/1/13	1	environmental ethics and economics	2	2	Barucha and Anji reddy Anubha kaushik
8	8	2/1/13	1	Causes, threats to sustainability	2	2	Barucha Anji reddy Anubha kaushik
9	9	3/1/13	1	Concept of green building	2	2	Barucha Anji reddy Anubha kaushik
10	10	10/1/13	1	Clean	2	2	Barucha Anji

				development mechanism			reddy Anubha kaushik
--	--	--	--	--------------------------	--	--	----------------------------

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:

Note: 1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.  
2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED IN BOLD  
3. MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.



## SCHEDULE OF INSTRUCTIONS COURSE PLAN

Academic Year : 2012-2013  
Semester : I UNIT NO.: 4.....  
Name of the Program: B.Tech Biotechnology... Year: ...1... Section: A

Course/Subject: ...Environmental science..... Course Code: GR11A1009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Unit No.	Lesson No.	Date	No. of Periods	Topics / Sub-Topics	Objectives Nos	Outcomes Nos.	References (Text Book, Journal...) Page Nos.: _____ to _____
1.	1.	28/11/12	1	Types, cause, effects of natural disasters, global warming	4	4	Barucha and Anji reddy Anubha kaushik
2.	2.	28/11/12	1	Ozone layer- role, location and degradation	3	3	Barucha and Anji reddy
3.	3.	29/12/12	1	Deforestation	2	2	Barucha, Anubha kaushik
4.	4.	29/12/12	1	desertification	3	3	Barucha Anji reddy Anubha kaushik
5.	5.	5/12/12	1	Technological solutions, preventive methods	2	2	Barucha Anji reddy
6.	6.	5/12/12	1	control techniques	3	3	Barucha, kaushik
7	7.	6/12/12	1	Green belt development	3	3	Barucha and Anji reddy Anubha kaushik
8	8	6/12/12	1	rain water harvesting	2	2	Barucha and Anji reddy Anubha kaushik
9	9	12/12/12	1	Renewable resources	2	2	Barucha and Anji reddy Anubha kaushik



10	10	13/12/12	1	Alternate resources	2	2	Barucha and Anji reddy Anubha kaushik
----	----	----------	---	---------------------	---	---	--

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:

- Note:
1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
  2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED IN BOLD
  3. MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**SCHEDULE OF INSTRUCTIONS**  
**COURSE PLAN**

Academic Year : 2012-2013

Semester : I

UNIT NO.: 3.....

Name of the Program: B.Tech Biotechnology... Year: ...1... Section: A

Course/Subject: ...Environmental science..... Course Code: GR11A1009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Unit No.	Lesson No.	Date	No. of Periods	Topics / Sub-Topics	Objectives Nos	Outcomes Nos.	References (Text Book, Journal...) Page Nos.: _____to _____
1.	1.	1/11/12	1	Definition, types of pollutants	4	4	Barucha and Anji reddy Anubha kaushik
2.	2.	1/11/12	1	classification of pollution,	3	3	Barucha and Anji reddy
3.	3.	7/11/12	1	Causes, effects and control of air pollution	2	2	Barucha, Anubha kaushik
4.	4.	7/11/12	1	Causes, effects and control of water pollution	3	3	Barucha Anji reddy Anubha kaushik
5.	5.	8/11/12	1	Causes, effects and control of marine	2	2	Barucha Anji reddy
6.	6.	8/11/12	1	Causes, effects and control of noise pollution	3	3	Barucha, kaushik
7	7.	14/1/12	1	effects and control of thermal pollution	3	3	Barucha and Anji reddy Anubha kaushik
8	8	14/11/12	1	effects and control of nuclear pollution	2	2	Barucha and Anji reddy Anubha kaushik
9	9	21/11/12	1	effects and control of soil pollution	2	2	Barucha and Anji reddy Anubha kaushik
10	10	22/11/12	1	Occupational hazards	2	2	Barucha and Anji reddy Anubha

							kaushik
--	--	--	--	--	--	--	---------

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:

- Note:
1. ENSURE THAT ALL TOPICS SPECIFIED IN THE COURSE ARE MENTIONED.
  2. ADDITIONAL TOPICS COVERED, IF ANY, MAY ALSO BE SPECIFIED IN BOLD
  3. MENTION THE CORRESPONDING COURSE OBJECTIVE AND OUT COME NUMBERS AGAINST EACH TOPIC.



## **COURSE OUTCOMES**

Academic Year : 2012-2013

Semester : I

Name of the Program: B.Tech ...Biotechnology... Year: 1... Section: A

Course/Subject: ...Environmental Science..... Course Code: GR11A1009

Name of the Faculty: .....Srilakshmi.....Dept. Basic science.....

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

The expected outcomes of the Course/Subject are:

<b>S.No</b>	<b>Outcomes</b>
1	To develop knowledge of the concept of environment, ecosystem and biodiversity.
2	To develop positive and negative effects of different natural resources.
3	To develop knowledge about the pollution causing agents and their effects.
4	To develop awareness about the role of ozone layer, importance of rain water harvesting and climate change.
5	To develop awareness about environmental protection and sustainability.

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:

Note: Please refer to Bloom's Taxonomy, to know the illustrative verbs that can be used to state the outc



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**ASSIGNMENT SHEET – 4**

Academic Year : 2012-2013 Date:.....

Semester : I

Name of the Program: B.Tech ...Biotechnology..... Year: .....1..... Section: A

Course/Subject: .....Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Assignment corresponds to Unit No. / Lesson .....4.....

Q1. Describe the role of ozone layer, why it is so important and a cause of worry for all the people?

Q2. What are greenhouse gases and greenhouse effect?

Q3. What is rain water harvesting and write their importance at the present day?

Q4. Name the different types of natural disasters and discuss in brief about them.

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 3, To develop knowledge in ozone layer 2) climate change 3) rain water harvesting

Outcome Nos.: 4, 1) They understand about the environmental problems 2) importance of rain water harvesting 3) impacts of depletion of ozone layer 4) climate change.

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



**ASSIGNMENT SHEET – 5**

Academic Year : 2012-2013 Date:.....

Semester : I

Name of the Program: B.Tech ...Biotechnology..... Year: .....1..... Section: A

Course/Subject: .....Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.: Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Assignment corresponds to Unit No. / Lesson .....5.....

Q1. Define sustainable development? Why it is necessary?

Q2.Discuss about the concept of green buildings, why it is becoming very popular now a days?

Q3.Discuss the role of IT specifically in environment protection?

Q4.What are the basic principles of natural environmental policy?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 3, 1.To develop knowledge in about environment protection 2) Disposable methods of various waste materials 3) concept of green building and role of IT in environment.

Outcome Nos.: 3...1) They understand about the environment protection 2) Disposable methods  
3) Concept of green building

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



**ASSIGNMENT SHEET – 3**

Academic Year : 2012-2013 Date:.....

Semester : I

Name of the Program: B.Tech ...Biotechnology..... Year: .....1..... Section: A

Course/Subject: .....Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept: Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Assignment corresponds to Unit No. / Lesson .....3.....

Q1. Define the major sources of soil pollution?

Q2. Give an account of the adverse effects of air pollution.

Q3. What are the main sources of marine pollution? Discuss about the sources.

Q4. Discuss about the adverse effects and control of water pollution?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 3, 1. To develop knowledge in pollution 2) causes, effects and control of water pollution  
3) Role of individual in controlling pollution

Outcome Nos.: 3...1) They understand about the environmental pollution 2) causes, effects and control of pollution

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**COURSE COMPLETION STATUS**

Academic Year : 2012-2013

Semester : I

Name of the Program: B.Tech ...Biotechnology..... Year: ...1..... Section: A

Course/Subject: .....Environmental science..... Course Code: GR11A1009

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

Actual Date of Completion & Remarks, if any

Units	Remarks	No. of Objectives Achieved	No. of Outcomes Achieved
Unit 1	Completed within the planned period	4	4
Unit 2	Completed within the planned period	4	4
Unit 3	Took some extra classes	4	4
Unit 4	Completed within the planned period	3	4
Unit 5	Took some extra classes	3	3
Unit 6			

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:

Note: After the completion of each unit mention the number of Objectives & Outcomes Achieved.





**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

## **COURSE OBJECTIVES**

Academic Year : 2012-2013

Semester : I

Name of the Program: B.Tech Biotechnology..... Year: ...1... Section: A

Course/Subject: .....Environmental science..... Course Code: GR11A1009.....

Name of the Faculty: ...Srilakshmi.....Dept.: Basic science

Designation: ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

On completion of this Subject/Course the student shall be able to:

<b>S.No</b>	<b>Objectives</b>
1	They understand about concept of ecosystem, biodiversity
2	They gained information about the importance of natural resources.
3	They understand about the pollution causing agents, how to control the pollution and its effect on human health.
4	They understand about the importance of rain water harvesting, global warming and role of ozone layer
5	They gained knowledge about the importance of environmental protection, disposable methods of waste material.
6	

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:

Note: Please refer to Bloom's Taxonomy, to know the illustrative verbs that can be used to state the objectives.



**TUTORIAL SHEET - 1**

Academic Year : 2012-2013 Date:.....

Semester : I

Name of the Program: B.Tech ..... Biotechnology..... Year: .....1..... Section: A / B /C /D

Course/Subject: Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....1.....

Q1. What are the different components of ecosystem?

Q2. Define food chain and food web? Give their significance.

Q3. What is biogeochemical cycle? Explain about nitrogen cycle with a neat diagram.

Q4. What is hot-spot of diversity? What are the consumptive, social and productive values of biodiversity?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 4,

2. To develop insight about environment 2) ecology3) classification and function of ecosystem and 4)biodiversity

Outcome Nos.:4...1) They understand about environment 2) concept of ecosystem  
3) Biodiversity 4) values and types of biodiversity.

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**TUTORIAL SHEET - 2**

Academic Year : 2012-2013 Date:.....

Semester : I

Name of the Program: B.Tech ..... Biotechnology..... Year: .....1..... Section: A / B /C /D

Course/Subject: Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....2.....

Q1. What are the effects of over utilization of ground water?

Q2. Define renewable and non-renewable resources with example.

Q3. What are mineral resources? Elaborate the impacts of mining?

Q4. What is the role of individual in conservation of natural resources?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 4,

3. To develop insight about the role of individual in conservation of resources 2) impacts of mining
4. 3) impacts of excess usage of water and 4) forest and wild life protection

Outcome Nos.:4...1) They understand about the importance of resources 2) impacts of mining  
3) Importance of water 4) forest and wild life protection

Srilakshmi

Signature of HOD

Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
**Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**TUTORIAL SHEET - 3**

Academic Year : 2012-2013 Date:.....

Semester : I

Name of the Program: B.Tech ..... Biotechnology..... Year: .....1..... Section: A / B /C /D

Course/Subject: Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....3.....

Q1. What are the adverse effects of air pollution?

Q2.How does noise effect human health?

Q3. Define thermal pollution and describe its effects.

Q4. Discuss the adverse effects of water pollution?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 4,

2. Gained knowledge about different types of pollutions
- 2) agents which cause pollution
- 3) Classification of pollutants
- 4) causes, effects and control of pollution

Outcome Nos.:4...1) They understand about the impacts of environmental pollution 2) causes of pollution  
3) effects of pollution 4) effects of pollution

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440**

**TUTORIAL SHEET - 4**

Academic Year : 2012-2013 Date:.....

Semester : I

Name of the Program: B.Tech ..... Biotechnology..... Year: .....1..... Section: A / B /C /D

Course/Subject: Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....4.....

Q1. Describe the role of ozone layer, why it is so important and a cause of worry for all the people?

Q2.What are greenhouse gases and greenhouse effect?

Q3.What is rain water harvesting and write their importance at the present day?

Q4. Name the different types of natural disasters and discuss in brief about them.

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 3,

2. To develop knowledge in ozone layer 2) climate change 3) rain water harvesting

Outcome Nos.:4...1) They understand about the environmental problems 2) importance of rain water harvesting 3) impacts of depletion of ozone layer 4) climate change

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:



**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**  
Bachupally, Kukatpally, Hyderabad – 500 090, A.P., India. (040) 6686 4440

**TUTORIAL SHEET - 5**

Academic Year : 2012-2013 Date:.....

Semester : I

Name of the Program: B.Tech ..... Biotechnology..... Year: .....1..... Section: A / B /C /D

Course/Subject: Environmental science.....

Name of the Faculty: .....Srilakshmi.....Dept.:...Basic science.....

Designation : ASST.PROFESSOR/ ASSOCIATE PROFESSOR/ PROFESSOR/HOD.

This Tutorial corresponds to Unit No. / Lesson .....5.....

Q1. Define sustainable development? Why it is necessary?

Q2.Discuss about the concept of green buildings, why it is becoming very popular now a days?

Q3.Discuss the role of IT specifically in environment protection?

Q4.What are the basic principles of natural environmental policy?

Please write the Questions / Problems / Exercises which you would like to give to the students and also mention the Objectives/Outcomes to which these Questions / Problems / Exercises are related.

Objective Nos.: 3,1.To develop knowledge in about environment protection 2) Disposable methods of various waste materials 3) concept of green building and role of IT in environment.

Outcome Nos.:3...1) They understand about the environment protection 2) Disposable methods 3) concept of green building

Signature of HOD

Srilakshmi  
Signature of faculty

Date:

Date:

