



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR  
(AUTONOMOUS)**

**Subject with Code: Environmental Science(23HS0805)**

**Branch: B. Tech- COMMON TO ALL**

**Year & Sem: II-B. Tech ISEM**

**Regulation: R23**

**QUESTION BANK**

**UNIT-I**

**NATURAL RESOURCES**

|     |                                                                                                                 |                |
|-----|-----------------------------------------------------------------------------------------------------------------|----------------|
| 1.  | Define Environment. Explain Multidisciplinary nature of Environmental studies.                                  | [CO1][L1][10M] |
| 2.  | (a)Discuss Scope and Importance of Environmental studies.                                                       | [CO1][L2][5M]  |
|     | (b) Explain the need of public awareness towards environment.                                                   | [CO1][L1][5M]  |
| 3.  | (a)Differentiate Renewable and non-renewable resources with examples.                                           | [CO1][L3][5M]  |
|     | (b) What are the uses of forest?                                                                                | [CO1][L1][5M]  |
| 4.  | (a) What are the major causes of deforestation? What are the effects of deforestation on Environment?           | [CO1][L1][5M]  |
|     | (b) Discuss briefly droughts and floods.                                                                        | [CO1][L2][5M]  |
| 5.  | Define Aquifer. Discuss its types with the diagram.                                                             | [CO1][L1][10M] |
| 6.  | What are major causes for conflicts over water? Discuss one international and One inter-state water conflict.   | [CO1][L2][10M] |
| 7.  | What are the uses of minerals and discuss the major environmental impacts of mineral extraction?                | [CO1][L2][10M] |
| 8.  | Explain impacts on Overgrazing and Agriculture.                                                                 | [CO1][L1][10M] |
| 9.  | (a) Give an account on Solar energy, Wind energy, and Tidal Energy.                                             | [CO1][L1][6M]  |
|     | (b) Write a brief note on Nuclear Energy.                                                                       | [CO1][L2][4M]  |
| 10. | Discuss the use and over exploitation of water resources. Give an account on uses and exploitation of Minerals. | [CO1][L2][10M] |

## **UNIT-II**

### **ECOSYSTEMS AND BIODIVERSITY**

|     |                                                                                          |                |
|-----|------------------------------------------------------------------------------------------|----------------|
| 1.  | Describe the structure and functions of an Ecosystem.                                    | [CO2][L1][10M] |
| 2.  | (a)Discuss the models of Energy flow in an Ecosystem.                                    | [CO2][L2][5M]  |
|     | (b) Explain Food chain and its types.                                                    | [CO2][L1][5M]  |
| 3.  | Explain various processes involved in Ecological succession.                             | [CO2][L1][10M] |
| 4.  | (a)Write a short note on Ecological pyramids.                                            | [CO2][L2][6M]  |
|     | (b) Write about Food web.                                                                | [CO2][L2][4M]  |
| 5.  | Explain the different types in aquatic ecosystem and desert ecosystem.                   | [CO2][L1][10M] |
| 6.  | Define Biodiversity. Explain Genetic diversity, Species diversity & Ecosystem diversity. | [CO2][L1][10M] |
| 7.  | Discuss the values of Biodiversity.                                                      | [CO2][L2][10M] |
| 8.  | Explain Bio-geographical classification of India.                                        | [CO2][L1][10M] |
| 9.  | (a)Define hotspot of Biodiversity.                                                       | [CO2][L1][2M]  |
|     | (b)What are the hotspots found in India? Discuss their salient Features.                 | [CO2][L2][8M]  |
| 10. | What is Red Data Book? Give a brief account on In-situ and ex-situ conservation.         | [CO2][L2][10M] |

### UNIT-III

#### ENVIRONMENTAL POLLUTION

|     |                                                                                                                      |                |
|-----|----------------------------------------------------------------------------------------------------------------------|----------------|
| 1.  | Define Air pollution. Explain its causes, effects and control measures of Air pollution.                             | [CO3][L1][10M] |
| 2.  | Explain in detail about Water pollution causes, effects and control measures of water pollution.                     | [CO3][L1][10M] |
| 3.  | What are environmental effects due to soil pollution? Explain its causes and remedial measures.                      | [CO3][L2][10M] |
| 4.  | (a) Define Noise pollution.                                                                                          | [CO3][L1][2M]  |
|     | (b) Write its causes, effects and control measures.                                                                  | [CO3][L2][8M]  |
| 5.  | How can you, as an individual, prevent environmental pollution? Why such an effort at Individual level is important? | [CO3][L3][10M] |
| 6.  | What do you understand by Thermal pollution? Discuss various effects and control measures of thermal pollution.      | [CO3][L2][10M] |
| 7.  | Define radioactivity. Mention the sources and effects of radioactivity.                                              | [CO3][L1][10M] |
| 8.  | Classify solid waste. What adverse effects can solid waste can cause? How can a solid waste be managed?              | [CO3][L2][10M] |
| 9.  | (a) Write a short note on Bhopal gas tragedy.                                                                        | [CO3][L2][5M]  |
|     | (b) Give an account on Chernobyl nuclear disaster.                                                                   | [CO3][L1][5M]  |
| 10. | Give an account on Earthquake, Floods and Cyclones.                                                                  | [CO3][L1][10M] |

## **UNIT-IV**

### **SOCIAL ISSUES AND THE ENVIRONMENT**

|     |                                                                                                |                |
|-----|------------------------------------------------------------------------------------------------|----------------|
| 1.  | What do you mean by Sustainable development? What are major measures to attain sustainability? | [CO4][L1][10M] |
| 2.  | (a) What is rainwater harvesting? Write the objectives of rainwater harvesting.                | [CO4][L2][5M]  |
|     | (b) Discuss on Traditional and Modern rainwater harvesting techniques.                         | [CO4][L2][5M]  |
| 3.  | What is watershed? Critically discuss the objectives and practices of Watershed management.    | [CO4][L2][10M] |
| 4.  | Write a short note on<br>(a) Global warming.                                                   | [CO4][L1][5M]  |
|     | (b) Acid rains....                                                                             | [CO4][L2][5M]  |
| 5.  | Discuss the natural formation and occurrence of ozone in the Stratosphere.                     | [CO4][L3][10M] |
| 6.  | Discuss various measures for wasteland reclamation.                                            | [CO4][L2][10M] |
| 7.  | Write a critical note on nuclear holocaust and ozone layer depletion.                          | [CO4][L2][10M] |
| 8.  | Give a brief note on consumerism and waste products.                                           | [CO4][L2][10M] |
| 9.  | (a) Discuss the salient features of Wildlife (Protection) Act, 1972.                           | [CO4][L2][5M]  |
|     | (b) Discuss various provisions for Forest (Conservation) Act, 1980.                            | [CO4][L2][5M]  |
| 10. | (a) Discuss the Major Environmental Protection Rules, 1986.                                    | [CO4][L2][5M]  |
|     | (b)What are the salient features of Water (Prevention and Control of Pollution) Act, 1974.     | [CO4][L2][5M]  |

## **UNIT-V**

### **HUMAN POPULATION AND THE ENVIRONMENT**

|     |                                                                                                                                      |                |
|-----|--------------------------------------------------------------------------------------------------------------------------------------|----------------|
| 1.  | Write a note on Population growth? What are the factors influencing population size?                                                 | [CO5][L2][10M] |
| 2.  | What do you mean by (a) Doubling time (b) Total Fertility Rate (c) Zero Population Growth (d) Life Expectancy (e) Replacement level. | [CO5][L2][10M] |
| 3.  | (a)What is meant by ‘Population Explosion’?                                                                                          | [CO5][L2][5M]  |
|     | (b)Discuss the Family welfare and Family planning program.                                                                           | [CO5][L2][5M]  |
| 4.  | Discuss the influence of environmental parameters and pollution on human health.                                                     | [CO5][L2][10M] |
| 5.  | Discuss the salient features of draft Declaration of Human Rights and Environment.                                                   | [CO5][L2][10M] |
| 6.  | Briefly discuss Value Education.                                                                                                     | [CO5][L2][10M] |
| 7.  | Briefly discuss HIV/AIDS, mode of its spread and its effects on environment.                                                         | [CO5][L2][10M] |
| 8.  | Discuss various issues and measures for women and child welfare at international and national level.                                 | [CO5][L2][10M] |
| 9.  | Discuss the role of Information Technology in Environment and human health.                                                          | [CO5][L2][10M] |
| 10. | Prepare a field report of the visit of a hill site.                                                                                  | [CO5][L2][10M] |