



SHRI ANGALAMMAN COLLEGE OF ENGINEERING & TECHNOLOGY
(An ISO 9001:2008 Certified Institution)
SIRUGANOOR, TRICHY-621105.



DEPARTMENT OF CHEMISTRY

HS1201 - ENVIRONMENTAL SCIENCE AND ENGINEERING

UNIT 1 INTRODUCTION TO ENVIRONMENTAL STUDIES AND NATURAL
RESOURCES

Part A

1. Compare merits and problems of dams.
2. What is meant by soil erosion?
3. Explain overgrazing.
4. What is salinity and water logging?
5. State the significance and scope of environmental problems.
6. What is Eutrophication?
7. State the need for public awareness for solving environmental problems.
8. Explain biosphere.
9. How are forests useful to mankind?
10. Mention the causes of desertification?
11. Define environmental impact and statement.
12. What are renewable and non-renewable energy sources. Give example.
13. Environmental awareness is need of the hour comment.
14. Write any two adverse effects caused by overgrazing.
15. Define environmental science.
16. Mention some important causes of over exploitation.
17. Define sustainable forestry.
18. What are preventive measure of deforestation.
19. Explain flood management.

Part-B

1. What are the major causes of deforestation? Discuss its consequences.
2. Discuss the impacts of handling the mineral resources for extraction and subsequent utilization on the environment.
3. Write briefly on the hydrologic cycle
4. Explain how the alternate energy sources play an important role in environmental impact?
5. Discuss the problems of pesticide on modern agriculture.
6. Discuss the effects of dams on forests and tribal people.

7. Explain any two conflicts over water, confining to our nation.
 8. Explain briefly the structure of atmosphere.
 9. How is the wind energy used for the generation of electric power.
 10. Explain adverse environmental impacts of modern agriculture.
 11. Discuss in detail causes and consequences of overexploitation of forest resources.
 12. Discuss various techniques for harnessing solar energy.
 13. Discuss various types of land degradation with its causes and solutions.
 14. Discuss the uses and effects of overutilization of surface and ground water sources.
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Unit 2 Ecosystem and biodiversity

Part A

1. Define ecosystem.
2. What is ecology.
3. What is ecological succession. Mention its types.
4. What are ecological pyramids.
5. What is food chain?
6. What is food web?
7. How does a biome differ from an ecosystem.
8. What is meant by keystone species.
9. Define biodiversity.
10. What are the advantages and disadvantages of ex-situ conservation.
11. Enumerate the human activities which destroy biodiversity.
12. Explain threatened and endangered species.
13. India is a mega diversity nation. Account.
14. What is meant by genetic diversity.
15. Give few examples for endangered and endemic species of India.
16. What are autotrophs and heterotrophs. Give examples.
17. What are two important biodiversity hot-spots in India.

Part-B

1. Show structure and function of forest ecosystem, aquatic ecosystem.
2. Briefly discuss the structure and functional components of ecosystem.
3. Write short notes on the following a) energy flowing ecosystem b) biotic ecosystem c) threats of biodiversity.
4. Explain the various threats to and the measure recommended for conservation of biodiversity.
5. Discuss the threat faced by Indian biodiversity.
6. Explain the strategy adopted to conserve biodiversity.
7. Explain the role of biodiversity at global, national and local levels.

8. Describe the term hot spot in biodiversity.
9. What do you understand by hot spots of biodiversity.
10. Explain in-situ and ex-situ conservation along with their merits and limitations,
11. What are the caused for loss of biodiversity?
12. With a neat sketch explain the flow energy through the various components of the ecosystem.
13. Discuss the concept of ecological pyramid.

Unit 3 Environmental pollution

Part-A

1. Environmental pollution.
2. Name the sources and effects of marine pollution?
3. Define thermal pollution.
4. Define hazardous wastes.
5. Name any four air pollutants and their sources and effects.
6. When a sound causes noise pollution?
7. What are the types of solid wastes?
8. Write any four major water pollutants.
9. Define photo chemical smog.
10. How does earthquake occurs.
11. Write any tow causes of soil pollution.
12. Give any four methods to control noise pollution.
13. Differentiate between recycling and reuses.
14. How nuclear hazards can be disposal safely?
15. Give examples for primary and secondary air pollutants.
16. What are landslides.

Part-B

1. Explain the methods of disposal of municipal solid waste.
2. Write a note on disposal of radioactive wastes.
3. Explain the causes, effects and control measure of water pollution.
4. What are the major pollutants of atmosphere? Enumerate the adverse effects caused by these pollutants.
5. Explain Bhopal gas tragedy.
6. Explain the effect of CO, SO₂, Hydrocarbon and chromium on human beings.
7. Explain the effects of nuclear and Radiation pollution.
8. What is thermal pollution and explain its effects.
9. Explain a) The disaster management in detail b) The various methods of controlling water pollution.

10. What is the significance of dissolved oxygen in river? Explain.
11. What is earthquake? Enumerate its effects. What measures should be taken to mitigate their disaster?
12. Discuss briefly the disposal of municipal solid waste.
13. Discuss the causes and effects of i) Air pollution ii) soil pollution
14. With a flow diagram explain the activated sludge process for waste water treatment.
15. What are the effects of oil pollution on the ocean?

UNIT- 4- SOCIAL ISSUES AND THE ENVIRONMENT

PART-A

1. Define the term sustainable development.
2. Define the term environmental ethics.
3. What is green house effect.
4. Give some examples of green house gases.
5. What are the causes and effects of global warming?
6. What are the causes and effects of ozone layer depletion?
7. What is acid rain?
8. How CFC's are accumulated in atmosphere.
9. What is Dobson unit.
10. Explain the term " Global warming".
11. What are the advantages of rain water harvesting?
12. Define air pollutants according to "air prevention and control of pollution act".
13. What are the important causes of climate change?

UNIT 5- HUMAN POPULATION AND THE ENVIRONMENT

PART-A

1. Define immigration and emigration.
2. What is population explosion?
3. What are the causes of population explosion?
4. What are the objectives of family welfare programme?
5. What are the factors which do not influence transmission of HIV?
6. How does HIV functions in human body.
7. Mention some ill effect of HIV/ AIDS.
8. State the role of information technology in environment.
9. Define population equilibrium.
10. What are the major precautions to avoid AIDS?

11. What are the reasons behind the increased population growth in the less developed nations compared developed nations.
12. Differentiate between HIV and AIDS.

PART-B

1. Explain the role of information technology in environment and human health.
2. Write a note on AIDS in developing countries?
3. What is AIDS? How to prevent it?
4. Write a short note: Value education.
5. Write briefly on implementation of family planning programme.
6. Deterioration of environment leads to deterioration of human health. Justify.
7. Explain the environmental and social impacts of growing population.
8. Write short notes on the following in relation to human population and environment i)Women and child welfare ii)Human rights iii)Value Education.
9. Discuss the factors influencing family size.
10. Discuss the reason for the population explosion.
11. Define human rights and discuss the salient features of the Universal Declaration of human rights by UN.
12. What are the modes of transmission of HIV and how it can be prevented?
