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## PRINCIPLES OF ENVIRONMENTAL SCIENCE AND ENGINEERING – ANNA UNIVERSITY QUESTION PAPER

ANNA UNIVERSITY :: CHENNAI - 600 025

B.E. / B.TECH. DEGREE PROGRAMMES

## PRINCIPLES OF ENVIRONMENTAL SCIENCE AND ENGINEERING

Time: 3hrs Max Marks: 100

Answer all Questions

PART - A  $(10 \times 2 = 20 \text{ Marks})$ 

- 1. What are the different components of eco system?
- 2. List the different Biogeo chemical cycles in the environment.
- 3. List the different natural and man made impacts on the environment.
- 4. Define policy cycle.
- 5. Differentiate between trickling filter process and activated sludge process.
- 6. What are the issues addressed by Montreal Protocol and Kyoto Protocol?
- 7. List out the factors on which the amount of waste generation depends.
- 8. What are the different modules of green chemistry expert system (GCES)?
- 9. Define the polluter pays principle.
- 10. Give a very important, current environmental issue, which creates a major problems to the environment.

PART - B (5 x 16 = 80 Marks)

- 11. Explain the concept of "Sustainable Development".
- 12.a) What are the components of the environment? Explain their inter relationship.

(OR)

- 12.b) What are the causes and effects of air, water and land pollution? Enumerate a few remedial measures.
- 13.a) Define sewage and explain the municipal sewage treatment process.

(OR)

- 13.b) i) Explain the importance of protecting Biodiversity.
- ii) Explain different methods of air pollution control.
- 14.a) Write detailed note on waste minimization.

(OR)

- 14.b) Explain the concept of clean technology, Eco- mark and Green chemistry?
- 15.a) Explain in Detail the Role of non-government organizations on the environment.

(OR)

15.b) Explain in detail the process of EIA.

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