

O. C.

A 1102

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2007.

Seventh Semester

Civil Engineering

CE 071 — PRINCIPLES OF ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to all branches)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List out the distinct atmospheric layers above the earth and their distance from the earth's surface.
2. Define food web.
3. What is meant by photochemical smog?
4. Differentiate between BOD and COD.
5. How does the use of fossil fuel affect the environment?
6. Give the important characteristics of solid waste.
7. List the sewage treatment units required in sequence for a municipal corporation.
8. What is meant by salvaging of solid waste? State its advantages?
9. Define the term precautionary principle in Environmental Management.
10. Give any two prevention and control of pollution acts of India.

PART B — (5 × 16 = 80 marks)

11. (a) Sketch and describe the components of environment and their interrelationship between them. (16)

Or

- (b) (i) Describe the concept of ecological pyramids. (8)
(ii) Discuss the impacts of urbanisation on environment. (8)
12. (a) Explain the various sources of soil pollution and describe their impact on soil. (16)

Or

- (b) (i) Discuss the effects due to presence of suspended matter and inorganic chemicals in water. (8)
(ii) Explain the pollution caused by oxides of Nitrogen in air. (8)
13. (a) Explain the various steps involved in solid waste management. (16)

Or

- (b) (i) What are Biomedical wastes? Discuss their importance. (8)
(ii) Explain the importance of biodiversity. (8)
14. (a) Justify the need for wastewater treatment. Briefly outline the different steps involved in wastewater treatment. (16)

Or

- (b) (i) Explain the advantages of clean technology. (8)
(ii) What are the benefits of pollution prevention? (8)
15. (a) (i) Justify the need of legislation for environmental protection. (8)
(ii) Write a note on polluter pays principle. (8)

Or

- (b) State and discuss any four international conventions. (16)