

Reg. No. :

Question Paper Code : P 1225

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Third Semester

Civil Engineering

CY 1201 — ENVIRONMENTAL SCIENCE AND ENGINEERING

(Regulation 2004)

(Common to Third Semester – all branches except Biomedical Engineering, Petroleum Engineering, Information Technology, Food Technology and (Also common to Second Semester – Computer Science and Engineering, ECE, Biomedical Engineering and Fifth Semester – Food Technology) (Also common to B.E. (Part-Time) – First Semester – Civil Engineering, EEE, ECE and Computer Science and Engineering and Second Semester – Mechanical Engineering – Regulation 2005)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are perpetual and renewable resources? Give examples.
2. Mention any four harmful human impact on coastal zones.
3. What are the main kinds of organisms in aquatic life zones?
4. List four potential chronic health effects of air pollution.
5. Define the word demand as it applies to water.
6. Distinguish between continuous, intermittent and impulsive noise.
7. What are biogeochemical cycles?
8. Where is most of the world's biodiversity found?
9. What do you mean by the term indicator species?
10. What is the difference between exponential and logistic population growth?

PART B — (5 × 16 = 80 marks).

11. (a) (i) What are the environmental impacts of extraction, processing and using mineral resources? (8)
- (ii) What is soil erosion? Mention the various methods employed to reduce it. (8)

Or

- (b) (i) What is desertification? What are its major causes and consequences? How can it be controlled? (8)
- (ii) What is geothermal energy? Describe the types of geothermal reservoirs. Discuss the advantages and disadvantages of using geothermal energy. (8)
12. (a) (i) How is water cycled in the biosphere? Explain how do human activities affect the water cycle? (8)
- (ii) Discuss the major types of deserts, grass lands and forests. (8)

Or

- (b) (i) Describe the major parts of the earth's life support system. (8)
- (ii) Summarize the major threats to biodiversity. (8)
13. (a) (i) What are the major biological components of ecosystem? Explain their activities. (8)
- (ii) Describe the formation and effects of acid rain. (8)

Or

- (b) (i) What is photochemical smog? Discuss the formation and effects of it. (8)
- (ii) What do you understand by green house effect? Explain its impacts. (8)
14. (a) (i) Discuss the various sources and effects of noise pollution. (8)
- (ii) Explain the role of chlorofluorocarbons in ozone layer depletion. Discuss the impact of ozone layer depletion. (8)

Or

- (b) (i) Write a note on water conservation and rain water harvesting. (8)
- (ii) Explain the causes and effects of urban and industrial wastes. (8)

15. (a) (i) Discuss briefly the various aspects of disaster management. (8)
(ii) Illustrate the role of information technology in environment and human health. (8)

Or

- (b) (i) What are the benefits and harmful effects of rapid population decline? Discuss. (8)
(ii) Explain the issues involved in the enforcement of environmental legislation. (8)

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