Reg. No. : | | | | | | | | | | | |

R 3266

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Third Semester

Civil Engineering

(Regulation 2004)

CY 1201 — ENVIRONMENTAL SCIENCE AND ENGINEERING

[Common to all branches (EXCEPT Bio-Medical Engineering/Information Technology/Food Technology and Petroleum Engineering) also common to B.E. (Part-Time) Second Semester – Regulation 2005]

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. Differentiate between deforestation and forest degradation.

2. Enumerate the desired qualities of an ideal pesticide.

3. How does a biome differs from an ecosystem?

4. Define Genetic diversity and Species diversity.

5. Differentiate between recycling and reuse.

6. Give examples for primary and secondary air pollutants.

7. Define the term sustainable development.

8. What is a Dobson unit?

9. What are the reasons behind the increased population growth in the less developed nations compared with developed nations?

10. Differentiate between HIV and AIDS.

PART B — (5 × 16 = 80 marks)

11. (a) (i) What are the ecological benefits of forests? (8)

(ii) "Environmental damages caused by mining last long after the mine has closed". Explain. (8)

Or

(b) (i) Discuss the Possible solutions to improve the acceptability of dam projects in Indian conditions. (8)

(ii) Explain the adverse environmental impacts of modern agriculture. (8)

12. (a) (i) With a neat sketch explain the flow of energy through the various components of the ecosystem. (producers, consumers and decomposers) (8)

(ii) Explain how fat-soluble pollutants like DDT get biomagnified. (8)

Or

(b) (i) Discuss the concept of ecological pyramid. (8)

(ii) Describe the term hot spot in biodiversity. (8)

13. (a) (i) What is the significance of Dissolved Oxygen in rivers? Explain. (8)

(ii) What are the effects of oil pollution on the oceans? (8)

Or

(b) (i) With a flow diagram explain the Activated sludge process for wastewater treatment. (8)

(ii) Explain the concept of source, path receiver in the control of noise pollution. (8)

14. (a) (i) Explain the mechanism of formation of acid rain. (8)

(ii) Discuss the phenomenon of global warming and the factors contributing to it. (8)

Or

(b) (i) What are the salient features of the following acts

(1) The Air (Prevention and control of pollution) Act, 1981 (4)

(2) The Environment (Protection) Act 1986. (4)

(ii) Discuss the possible mechanism of stratospheric ozone depletion. (8)

15. (a) (i) Draw a typical population pyramid of a developing country and discuss how it is likely to differ from that of a developed country. (8)

(ii) Define Human Rights and discuss the salient features of the Universal Declaration of Human Rights by UN. (8)

Or

(b) (i) Outline the various family welfare plans in the post independent India. (8)

(ii) What are the modes of transmission of HIV and how it can be prevented? (8)
