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

Question Paper Code : 23335

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2013.

Fifth Semester

Mechanical Engineering

CY 1201/HS 1201 — ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to Fifth Semester — Biomedical Engineering, Metallurgical Engineering, Production Engineering, Aeronautical Engineering, Mechatronics Engineering, Automobile Engineering, Information Technology and Food Technology and Eighth Semester Marine Engineering)

(Common to Third Semester – Aeronautical, Automobile, Biotechnology, Chemical, Electronics and Communication Engineering, Electrical and Electronics Engineering, Computer Science and Engineering, Metallurgical Engineering, Marine Engineering, Production Engineering, Instrumentation and Control Engineering, Civil Engineering, Mechanical Engineering, Mechatronics Engineering, Polymer Technology, Electronics and Instrumentation Engineering, Biomedical Engineering, Textile Technology, Textile Technology (Fashion Technology), Textile Technology (Textile Chemistry) and Second Semester – Biomedical Engineering, Computer science and Engineering, Electronics and Communication Engineering and Information Technology)

(Regulation 2004/2007)

(Also common to B.E. (Part-Time) First Semester Civil Engineering, Computer Science and Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering and Also common to B.E. (Part-Time) Second Semester Mechanical Engineering Regulation 2005)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the consequences of overexploitation of resources?

2. What is biological magnification?

3. Define "food chain".

4. Differentiate between 'endangered' and "epidemic" species.

5. What are secondary air pollutants? How do they form?

6. Define 'marine pollution'.

7. What is nuclear holocaust?

8. Define 'Sustainable development'.

9. What is Dobson ratio? Give its significance.

10. What is HIV? Give a test to detect HIV.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Briefly explain the adverse effects of mining activities in India with examples. (8)

(ii) Discuss the disadvantages of modern agricultural practices in India. (8)

Or

(b) (i) Discuss the advantages and limitations of conventional energy resources. (8)

(ii) Discuss the merits of solar energy and problems in harnessing solar energy. (8)

12. (a) (i) Explain the structure and characteristics of any one ecosystem. (8)

(ii) What is the need for biodiversity conservation? Explain the methods of biodiversity conservation. (8)

Or

(b) (i) Discuss the types of ecological pyramids. (8)

(ii) Explain the values of biodiversity reserves. (8)

13. (a) (i) Write down the effects of water pollutants on the health of a man and the environment. (8)

(ii) Explain the incineration method of solid waste disposal. (8)

Or

(b) (i) How would you control the noise pollution? Explain. (8)

(ii) What are the precautionary measures to be adopted in the event of cyclones and floods? (8)

14. (a) (i) What is green house effect? What are its impacts on the man and the environment? (8)

(ii) Explain the salient features of Air (Prevention of pollution) Act. (8)

Or

(b) (i) What are the objectives of water shed management? Explain. (8)

(ii) Explain the adverse effects of acid rain (8)

15. (a) (i) Discuss the factors influencing the family size. (8)

(ii) How does AIDS spread? Discuss the methods to prevent AIDS. (8)

Or

(b) (i) Explain the role of IT in Environmental protection. (8)

(ii) Discuss the role of NGO's in the development of environmental awareness among public. (8)

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