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

Question Paper Code : 31469

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Third Semester

Electrical and Electronics Engineering

GE 2211/ GE 33/080300008/ 080130067/10177 GE 001/10177 GE 001A — ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to Chemical Engineering, Textile Technology, Instrumentation and Control Engineering, Biotechnology, Plastic Technology, Electronics and Instrumentation Engineering, Polymer Technology and Textile Technology (Fashion Technology))

(Also common to 10177 GE 001 for Biotechnology, Electrical and Electronics Engineering, Electronics and Instrumentation Engineering, Instrumentation and Control Engineering and 10177 GE 001A for Chemical Engineering)

(Regulation 2008/2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How does land degradation take place? Write its adverse effects.
2. Write the economic importance of forest.
3. What is meant by ecological succession?
4. Differentiate food chain and food web with suitable examples.
5. Define biological oxygen demand and chemical oxygen demand. Write its importance in environmental studies.
6. What is hydrological cycle? Give the pictorial representation of hydrological cycle.
7. What is meant by sustainable development?
8. How does acid rain form? Write its environmental impacts.
9. What is meant by population explosion ? Write its consequences?
10. What are the objectives and elements of value education?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Discuss in detail the benefits and problems of constructing dams.

(ii) What are renewable and non-renewable energy resources? Explain the merits and demerits of any two renewable energy resources.

Or

(b) (i) What is meant by deforestation? Enumerate the causes for deforestation and explain its consequences.

(ii) List out various water resources and explain over utilization and exploitation of surface water.

12. (a) (i) Describe the structure and functions of forest ecosystem.

(ii) Explain in detail the various threats to biodiversity.

Or

(b) (i) Discuss in detail the energy flow in any aquatic eco-system .

(ii) Write note on the importance of conservating bio-diversity.

13. (a) (i) Discuss the sources, adverse effects and control methods of water pollution.

(ii) Elaborately discuss the steps involved in solid waste management.

Or

(b) (i) What are the sources for thermal pollution? Discuss briefly its effects and control methods.

(ii) How does earthquake take place? Explain the steps to be taken to mitigate the earthquake disaster.

14. (a) (i) With the help of neat diagram explain the principles of rain water harvesting.

(ii) Write short notes on nuclear accidents and ozone layer depletion.

Or

(b) (i) Explain in detail the reasons for global warming.

(ii) Write an elaborate note on the salient features of Environmental Protection Act.

15. (a) (i) With a neat diagram explain the variation in population growth among various nations.

(ii) Write a brief note on various family welfare programmes initiated by Govt. of India.

Or

(b) (i) Discuss the role of Information Technology in environmental protection and human health.

(ii) Explain the effects and control of AIDS.

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