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Question Paper Code : 90700

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

Second/Third/Fourth/Fifth/Sixth/Seventh Semester

Civil Engineering

GE 8291 — ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to: All Branches)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is deciduous forest? Give an example.
2. Differentiate consumers from decomposers.
3. What is smog? Give an example.
4. How the pollution by organic matter is measured in water?
5. Mention any two effects of excessive use of fertilizer.
6. Write two important necessity of afforestation.
7. Define the term global warming.
8. Write two problems related to nuclear energy.
9. List two preventive measures for viral infection.
10. Define the term value education.

PART B — (5 × 13 = 65 marks)

11. (a) Define ecosystem. Discuss the flow of energy in an ecosystem.

Or

- (b) Define biodiversity. Explain the in-situ and ex-situ conservation of biodiversity.

12. (a) Discuss elaborately about the management of solid waste in an urban city in Tamil Nadu without causing pollution.

Or

- (b) What are the natural disasters related to coastal and hilly terrain? Discuss the effective management strategies to prevent loss.

13. (a) Explain the various means of renewable energy generation. Discuss their environmental benefits over the conventional way of energy generation.

Or

- (b) Write in detail about the water resources of Tamil Nadu. Discuss the impact of flood and drought on the availability of water.

14. (a) What is sustainable development? Discuss the factors causing environmental pollution and the means of remediation.

Or

- (b) Discuss the salient features of The Environmental Protection Act of India.

15. (a) List out and discuss elaborately about the various steps involved in family welfare programme.

Or

- (b) (i) Discuss about population growth and its environmental impact. (9)
(ii) If a nation has 2% annual growth, in how many years its population will double? (4)

PART C — (1 × 15 = 15 marks)

16. (a) Explain in detail the observations to be made during a field study to a forest ecosystem present in Tamil Nadu. Suggest relevant measures to preserve the forest ecosystem.

Or

- (b) Discuss in detail about the use, exploitation and environmental issues related to mineral resources.
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