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Question Paper Code : 80507

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Third Semester

Civil Engineering

GE 6351 — ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to Third Semester Computer Science and Engineering, Electrical and Electronics Engineering, Electronics and Instrumentation Engineering, Instrumentation and Control Engineering, Environmental Engineering, Robotics and Automation Engineering, Information Technology, Polymer Technology, Textile Chemistry, Textile Technology, Fashion Technology, Biotechnology, Plastic Technology, Pharmaceutical Technology and Petrochemical Technology)

(Also common to Fourth Semester Agriculture Engineering, Geoinformatics Engineering, Mechanical Engineering and Chemical Engineering and Medical Electronics)

(Also common to Fifth Semester Electronics and Communication Engineering, Mechatronics Engineering, Automobile Engineering, Aeronautical Engineering, Production Engineering, Mechanical and Automation Engineering, Petrochemical Engineering, Petroleum Engineering)

(Common to Sixth Semester Biomedical Engineering and Materials Science and Engineering)

(Regulations 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define ecosystem diversity.
2. Write about any two chemical hazards present in the environment.
3. Mention the measures to control thermal pollution caused by industries.
4. List any four water quality parameters and their importance.
5. What is Biogas? Mention its uses.
6. Define Sustainable lifestyle.
7. Write any four principles of green chemistry.

8. What is consumerism? How does it affect the environment?
9. Define EIA and its benefits.
10. What are the objectives of Women Welfare systems?

PART B — (5 × 13 = 65 marks)

11. (a) (i) Describe the function of an ecosystem using energy flow and material cycling. (7)
(ii) Define In-situ and Ex-situ conservation of biodiversity and explain. (6)

Or

- (b) (i) Explain the stages in ecological succession using appropriate terminology. (7)
(ii) Justify India to be a mega biodiversity nation with the required data. (6)
12. (a) (i) Discuss about the causes, impacts and control measures of ozone depletion in the atmosphere. (7)
(ii) Write a flow sheet and explain the steps involved in Solid Waste Management. (6)

Or

- (b) (i) Mention any four air pollutants with their sources and emission control measures. (7)
(ii) What are the effects of Marine pollution? (6)
13. (a) (i) Explain the stages in desertification. (7)
(ii) What is over utilisation of water resources? Mention the remedial measures. (6)

Or

- (b) (i) Write a note on (1) use of fertilizers and pesticides (2) soil salinity problems. (7)
(ii) List the impact of deforestation on the environment. (6)
14. (a) (i) What is cyclone? Describe cyclone management using fore casting. (7)
(ii) What is Ecomark? Explain. (6)

Or

- (b) (i) Describe about The Air Act 1981. (7)
(ii) Name any three significant biomedical wastes and their safe disposal. (6)

15. (a) (i) What is value education? Mention its importance. (7)
(ii) Explain the role of GIS in environmental management. (6)

Or

- (b) (i) What is population explosion? Give the reasons behind it. (7)
(ii) Discuss the factors influencing human health under current environmental conditions. (6)

PART C — (1 × 15 = 15 marks)

16. (a) (i) Explain about any two methods of biodegradation of pollutants. (8)
(ii) Mention a case study on :
(1) Man and wild life conflict
(2) Productive use of biodiversity. (7)

Or

- (b) (i) Illustrate any two methods of harnessing alternative sources of energy. (8)
(ii) Describe in detail about any one pollution related case study. (7)