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Reg. No. :

**Question Paper Code : 53129**

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Third/Fourth/Fifth/Sixth/Seventh/Eighth/Ninth Semester

Civil Engineering

GE 6351 — ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to Mechanical Engineering (Sandwich)/Aeronautical Engineering/Agriculture Engineering/Automobile Engineering/Biomedical Engineering/Computer Science and Engineering/Electrical and Electronics Engineering/Electronics and Communication Engineering/Electronics and Instrumentation Engineering/Environmental Engineering/Geoinformatics Engineering/Industrial Engineering/Industrial Engineering and Management/Instrumentation and Control Engineering/Manufacturing Engineering/Marine Engineering/Materials Science and Engineering/Mechanical Engineering/Mechanical and Automation Engineering/Mechatronics Engineering/Medical Electronics/Petrochemical Engineering/Production Engineering/Robotics and Automation Engineering/Bio Technology/Chemical Engineering/Chemical and Electrochemical Engineering/Fashion Technology/Food Technology/Handloom and Textile Technology/Information Technology/Petrochemical Technology/Petroleum Engineering/Pharmaceutical Technology/Plastic Technology/Polymer Technology/Textile Chemistry/Textile Technology)

(Regulation 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Where from the word environment is derived and what does it refer to?
2. Write the criteria to determine hotspot and name the hot spots in India.
3. Classify the pollution types.
4. List the effects of acid rain.
5. What are the impacts of overgrazing?
6. Define eutrophication.
7. State the environmental ethics.

8. Mention the objectives of waste land reclamation.
9. How population density is calculated?
10. What is Geographic Information System (GIS)?

PART B — (5 × 13 = 65 marks)

11. (a) (i) Describe the structure and functions of grassland ecosystem. (7)  
(ii) Discuss the two approaches of wildlife conservation in protected habitats. (6)

Or

- (b) (i) Mention the role of an individual in conservation of natural resources. (7)  
(ii) With a neat diagram, discuss the energy flow in ecosystem. (6)
12. (a) Discuss the various sources, effects and control measures of soil and marine pollution. (13)

Or

- (b) (i) Discuss the ozone chemistry with neat diagram. (7)  
(ii) Explain the role of an individual in prevention of pollution. (6)
13. (a) Explain, how construction of dams affects forests and tribal people. (13)

Or

- (b) Discuss in detail about solar form of renewable energy sources. (13)
14. (a) (i) Elaborate on the approaches for sustainable development. (7)  
(ii) Depict the process of rainwater harvesting and mention its objectives. (6)

Or

- (b) (i) Discuss the features of wildlife conservation act and forest conservation act. (7)  
(ii) Write about climate change and global warming. (6)
15. (a) (i) Write short notes on various rights of human. (7)  
(ii) Explain how value education plays a key role in shaping children. (6)

Or

- (b) (i) Discuss the various family welfare programs implemented by state and central governments. (7)  
(ii) Throw light on the interlink between environment and human health. (6)

PART C — (1 × 15 = 15 marks)

16. (a) Provide a recent case study of how information technology played an important role in environment and health at the time of natural disaster.

Or

- (b) Explain the various unit operations and processes involved in water treatment with the help of a neat sketch.