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**Question Paper Code : 91503**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Fifth Semester

Mechanical Engineering

GE 2021/GE 32/GEU 024/080100016/080380015 – ENVIRONMENTAL SCIENCE  
AND ENGINEERING

(Common to Sixth Semester – Petroleum Engineering, Fifth Semester – Aeronautical Engineering, Automobile Engineering, Electronics and Communication Engineering, Production Engineering, Mechanical and Automation Engineering and Petrochemical Engineering, Fourth Semester – Biomedical Engineering and Geoinformatics Engineering, Third Semester – Civil Engineering, Computer Science and Engineering, Information Technology, Textile Chemistry, Pharmaceutical Technology and Petrochemical Engineering)

(Also Common to HS 1201 – Environmental Science and Engineering for Fifth Semester – Electronics and Communication Engineering, Fourth Semester – Biomedical Engineering and Third Semester – Computer Science and Engineering and Information Technology also common to 10177 GE 001 for Fifth Semester – Aeronautical Engineering, Automobile Engineering, Electronics and Communication Engineering, Mechanical Engineering and Textile Technology, Fourth Semester – Biomedical Engineering, Third Semester – Civil Engineering, Computer Science and Engineering and Information Technology)

(Regulation 2008/2010)

(Common to PTGE 2021 – Environmental Science and Engineering for B.E. : (Part – Time) – Second Semester Electronics and Instrumentation Engineering, Electrical and Electronics Engineering, Textile Technology and Third Semester – Civil Engineering – Regulation 2009)

(Common to 10177 GE 001 – Environmental Science and Engineering for B.E. (Part – Time) Second Semester – Civil Engineering, Mechanical Engineering, Electrical and Electronics Engineering Regulation 2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List out the biotic and abiotic component of an ecosystem.
2. What are the major threats to biodiversity?

3. Define hazardous waste.
4. Differentiate between sound and noise.
5. Write the preventive measures of deforestation.
6. What do you mean by environmental impact?
7. Define green house effect.
8. How does ozone layer depletion take place?
9. What is meant by population explosion?
10. What are the objectives of value education?

PART B — (5 × 16 = 80 marks)

11. (a) What is an eco system? Describe the structure and function of an eco system. (16)

Or

- (b) What do you mean by hot spots of biodiversity that extend in India? (16)
12. (a) Discuss the significance of any six parameters of drinking water quality standards. (16)

Or

- (b) Write short notes on causes and effects of
- (i) Air pollution (5)
  - (ii) Water pollution (6)
  - (iii) Marine pollution. (5)
13. (a) Write briefly on the hydrological cycle with neat sketch. (16)

Or

- (b) Explain in detail about the problems of chemical fertilizers and pesticides on modern agriculture. (16)
14. (a) Write short notes on following act
- (i) Water Prevention and Control of Pollution Act 1974 (8)
  - (ii) Forest Conservation Act 1980. (8)

Or

- (b) What is rain water harvesting? Explain their types with suitable sketches. (16)
15. (a) Briefly describe the various schemes launched for women and child welfare in India. (16)

Or

- (b) Explain the role of information technology in environmental and human health. (16)