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**Question Paper Code : 21636**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

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, Information Technology/Material Science and Engineering for Fifth Semester)

(Regulations 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 - Regulations 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 Regulations 2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are called decomposers?
2. What is hot spot?

3. Mention the effects of noise pollution.
4. What is eutrophication?
5. Define the term flood.
6. What are the effects of pesticides?
7. Define water shed management.
8. What are the reasons for formation of acid rain?
9. What is value education?
10. Mention two precautions to avoid AIDS.

PART B — (5 × 16 = 80 marks)

11. (a) (i) What is an ecosystem? Give an account of the structure and function of forest ecosystem. (8)
- (ii) Discuss the causes for extinction of species. (8)

Or

- (b) (i) Explain the flow of energy in an ecosystems. (8)
  - (ii) Discuss the concept of biodiversity at three hierarchical levels. (8)
12. (a) (i) Discuss the source, effects and control measures of air pollution. (8)
  - (ii) Write notes on salinity and dissolved oxygen. (8)

Or

- (b) (i) What are the sources of soil pollution? How can it be controlled? (8)
  - (ii) Explain the methods of disposal of solid wastes. (8)
13. (a) (i) What are the effects of over – utilisation of surface and ground waters? (8)
  - (ii) Explain the role of an individual in the conservation of natural resources. (8)

Or

- (b) (i) Discuss the benefits and problems of dams. (8)
- (ii) Write in detail the effects of timber extraction of forest and tribal people. (8)

14. (a) (i) Write an explanatory note on urban problems related to energy. (8)  
(ii) Explain in detail "Global warming". (8)

Or

- (b) (i) Write a note on rain water harvesting. (8)  
(ii) Discuss the issues involved in the enforcement of environmental legislation. (8)
15. (a) (i) Explain the term population explosion. Enumerate its effects. (8)  
(ii) What is AIDS? What are the sources and mode of transmission of HIV infection? (8)

Or

- (b) (i) Write an explanatory note on human right and family welfare. (8)  
(ii) Discuss the role of information technology in environment and human health. (8)