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**Question Paper Code : 31458**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Eighth Semester

Marine Engineering

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

(Common to Sixth Semester – Petroleum Engineering, Fifth Semester – Mechanical Engineering, 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)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is an ecosystem?
2. Differentiate between food chain and food web.
3. Define the term Noise Pollution.
4. What is a cyclone?
5. Mention the major environmental impacts of Mining.
6. What are the changes caused by overgrazing?
7. What is Environmental Ethics?
8. List the objectives of Forest Conservation Act.
9. What do you mean by Doubling time.
10. What is Value Education?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the role of producers, consumers and decomposers in an ecosystem. (8)  
(ii) What is the importance of protecting the Biodiversity of Earth. (8)  
Or
- (b) (i) Explain the various components and functions of forest ecosystem. (8)  
(ii) Identify and explain the major threats to the biodiversity of India. (8)
12. (a) (i) Explain the major water pollutants and their effects. (8)  
(ii) List and explain the methods of waste management in the order of preference. (8)  
Or
- (b) (i) Discuss the source, effects and control measures of thermal pollution. (8)  
(ii) What is an earth quake? Write its effects. What measures should be taken to mitigate the disaster. (8)
13. (a) (i) Discuss the effects of timber extraction on forests and tribal people. (8)  
(ii) What is land degradation? Mention the factors responsible for land degradation. (8)  
Or
- (b) (i) Explain the benefits and problems of dam. (8)  
(ii) Discuss the role of individual in the conservation of natural resources. (8)
14. (a) (i) What are the major urban problems related to energy? (8)  
(ii) Briefly discuss the salient features of the Environment (Protection) Act, 1986. (8)  
Or
- (b) (i) What is a watershed? Critically discuss the objectives and practices of water shed management. (8)  
(ii) Write short notes on Nuclear accidents and holocaust. (8)
15. (a) (i) Explain the term 'Population Explosion'. Enumerate its effects. (8)  
(ii) Discuss the role of Information Technology in the protection of Environment and Human health. (8)  
Or
- (b) (i) Describe the various schemes launched for woman and child welfare in India. (8)  
(ii) What are the modes of transmission of HIV? And how can it be prevented? (8)