

Question Paper Code : 21458

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2013.

Eighth Semester

Marine Engineering

GE 2021/GE 32/GE 33/HS 1201/10177 GE 001/080100016/080380015 —
ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to Sixth Semester – Petroleum Engineering, Fifth Semester – Mechanical Engineering, Aeronautical Engineering, Automobile Engineering, Electronics and Communication Engineering and Production Engineering, Third Semester – Civil Engineering, Computer Science and Engineering, Information Technology, Textile Chemistry, Pharmaceutical Technology, Petrochemical Engineering Fourth Semester – Biomedical Engineering and also common to 10177 GE 001 for Fifth Semester – Textile 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 are the main objectives of environmental awareness?
2. Distinguish between food chain and food web.
3. Define 'Thermal pollution'.
4. Mention the sources of water pollution.
5. What are the ecological benefits of forests?
6. Define the term 'Desertification'.

7. What are the urban problems related to energy?
8. Define the term 'Acid rain'.
9. How is HIV transmitted?
10. What is population explosion?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Define ecosystem. Give an account of the structure and functions of an ecosystem. (8)
- (ii) Name and discuss the values that can be assigned to biodiversity. (8)

Or

- (b) (i) Explain the concept of ecological pyramids. (8)
 - (ii) Discuss the threats faced by Indian biodiversity. (8)
12. (a) Define air pollution. What are the sources of air pollutants? Explain the approach to control of air pollution. (16)

Or

- (b) (i) Define 'flood'. What are the causes? What measures should be taken to mitigate flood disaster? (8)
 - (ii) Discuss any two methods of solid waste disposal. (8)
13. (a) (i) What are the purposes for which dams are built? (8)
 - (ii) What is land degradation? Mention the factors responsible for land degradation. (8)

Or

- (b) Explain the role of individual in the conservation of natural resources. (16)
14. (a) Explain the phenomenon of global warming and factors contributing to it. (16)

Or

- (b) Name the laws that have been framed for environmental protection. Mention the objectives of each act. (16)

15. (a) (i) Explain the environmental problems posed by population explosion. (8)
- (ii) Discuss the role of information technology in the protection of environment and human health. (8)

Or

- (b) (i) Explain the major objectives of family welfare programmes in India. (8)
- (ii) Write short notes on :
 - (1) HIV and
 - (2) Value education. (8)