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7751

Reg. No. :

Name :

**Seventh Semester B.Tech. Degree Examination, November 2015
(2008 Scheme)**

08.704 Elective – III (b) : ENVIRONMENTAL ENGINEERING (E)

Time : 3 Hours

Max. Marks : 100

instruction : Answer **all** questions from Part – A and **any one full** question from **each** Module of Part – B.

PART – A



1. Explain the role of technology in sustainable development.
2. Explain the relevance of biological ecology to technology.
3. Discuss the social dimensions of industrial ecology.
4. What is the role of green engineering in pollution prevention ?
5. Write short note on energy efficiency in product design.
6. Define water footprint.
7. What is meant by green washing ?
8. List out of the responsibilities of a citizen engineer.
9. What are the methods to protect intellectual property in emerging markets ?
10. What are the advantages of GPL among software licenses ? **(10×4=40 Marks)**

PART – B

Module – I

11. a) Explain the guidelines for the eco-design of the industrial products. **10**
- b) Explain the importance of life cycle assessment in sustainable engineering. **10**

OR

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12. a) Explain the concept of integrated system from a sustainability view point. 10
- b) Discuss the relationship between industrial ecology and sustainable engineering. 10

Module – II

13. a) Discuss the importance of renewable energy sources in GHG emission reduction. 10
- b) What are the major factors used in calculating the water footprint ? 10

OR

14. a) Discuss the role of eco-engineering in achieving carbon neutrality. 10
- b) Explain the relationship between water and industrial ecology. 10

Module – III

15. a) Discuss the intellectual property law fundamentals. 10
- b) Distinguish between good, bad and ugly patent protections. Explain with examples. 10

OR

16. Write short notes on :
- a) Patents 5
- b) Copyrights 5
- c) Trademarks 5
- d) Trade secrets. 5