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Question Paper Code	12206
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**B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023**

Seventh Semester

**Civil Engineering**

**20CYOE907 - GREEN TECHNOLOGY**

(Regulations2020)

Duration: 3 Hours

Max. Marks: 100

**PART-A (10 × 2 = 20 Marks)**

Answer ALL Questions

- |   | <i>Marks,<br/>K-Level, CO</i> |
|---|-------------------------------|
| 1. Define green technology.                             | <i>2,K1,CO1</i>               |
| 2. What is a 3R concept?                                | <i>2,K1,CO1</i>               |
| 3. Comment on environment feasibility analysis.         | <i>2,K2,CO2</i>               |
| 4. What is ISO 14000 cover?                             | <i>2,K1,CO2</i>               |
| 5. How carbon trading useful in environment protection? | <i>2,K1,CO3</i>               |
| 6. What is Eco-labelling? Give examples.                | <i>2,K2,CO3</i>               |
| 7. Give examples for conventional energy resources.     | <i>2,K2,CO4</i>               |
| 8. Define solar energy.                                 | <i>2,K1,CO4</i>               |
| 9. What are conventional fossil fuels? Examples.        | <i>2,K2,CO5</i>               |
| 10. Illustrate on geothermal energy.                    | <i>2,K1,CO5</i>               |

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

- |  |                  |
|--|------------------|
| 11. a) Explain the role of industrial ecology in green technology.                   | <i>13,K1,CO1</i> |
| <b>OR</b>  |                  |
| b) Write about instructions of operations and operands in detail.                    | <i>13,K2,CO1</i> |
| 12. a) Give a detail account on cleaner production assessment with flow diagram.     | <i>13,K2,CO2</i> |
| <b>OR</b>  |                  |
| b) Write a short note on cleaner production financing with pros and cons.            | <i>13,K2,CO2</i> |
| 13. a) Explain in detail about awareness plan related to waste in environment.       | <i>13,K2,CO3</i> |
| <b>OR</b>  |                  |
| b) Discuss in detail about life cycle assessment in carbon credit and sequestration. | <i>13,K2,CO3</i> |

14. a) Analyze the future possibilities of energy need and availability in non-conventional energy sources. *13,K2,CO4*

**OR**

- b) Give a brief note on Solar energy conversion technologies and devices. *13,K2,CO4*

15. a) What is Biomass energy? Explain the concept of biomass energy utilization. *13,K2,CO5*

**OR**

- b) Enumerate in detail about wind energy with neat sketch. *13,K2,CO5*

**PART - C (1 × 15 = 15 Marks)**

16. a) Summarize the role of industrial ecology in green technology. *15,K6,CO5*

**OR**

- b) Evaluate energy conversion technologies, their principles, equipment and suitability in Indian context with tidal and geothermal energy. *15,K5,CO5*