

Code No: **R204101Y**

**R20**

**Set No. 1**

**IV B.Tech I Semester Regular Examinations, January – 2024**

**GREEN TECHNOLOGIES**

**(Common to All Branches except Civil Engineering)**

**Time: 3 hours**

**Max. Marks: 70**

*Answer any FIVE Questions  
ONE Question from Each unit  
All Questions Carry Equal Marks*

\*\*\*\*\*

**UNIT - I**

- 1 a) Define Green Technology and the need for it. [7]  
b) List the advantages and disadvantages of green technologies. [7]  
(OR)
- 2 a) Define Cleaner Production and state its importance. [7]  
b) Discuss the principles of Cleaner Production. [7]

**UNIT - II**

- 3 a) Explain with an example/ case study to generate wealth from waste. [7]  
b) Explain technical and environmental feasibility analysis. [7]  
(OR)
- 4 a) With an example of how government and other institutions can encourage Cleaner Production and its implementation. [7]  
b) Describe: i) Total Cost Analysis ii) CP Financing [7]

**UNIT - III**

- 5 a) Explain the significance of Waste audit and Environmental Statement. [7]  
b) Explain the strategies for a Cleaner Production Awareness Plan. [7]  
(OR)
- 6 Define LCA and the Elements of LCA. [14]

**UNIT - IV**

- 7 Discuss the pathways of how to arrive at the future energy need and ensure its availability. [14]  
(OR)
- 8 List the Non-Conventional energy sources and list the advantages over the conventional energy sources. Also, clarify whether the existing demand can be met with non-conventional energy sources. [14]

**UNIT - V**

- 9 a) What are green fuels? State its benefits and challenges. [7]  
b) Define biomass energy and explain the conversion processes available. [7]  
(OR)
- 10 a) List down the economic and social impacts that will be encountered while adopting green fuel. [7]  
b) Discuss the possibilities of tidal and geothermal energy in the Indian context. [7]