

--	--	--	--	--	--	--	--	--	--

**GAYATRI VIDYA PARISHAD COLLEGE OF ENGINEERING FOR WOMEN**

(Autonomous)

(Affiliated to Andhra University, Visakhapatnam)

II B.Tech. - II Semester Regular Examinations, April – 2026**ENVIRONMENTAL SCIENCE**

[Common to CSE (AI&ML), EEE & ECE]

1. All questions carry equal marks
2. Must answer all parts of the question at one place

Time: 3Hrs.**Max Marks: 100****UNIT-I**

1. a. Discuss function and structure of an ecosystem [10M]
b. Differentiate in-situ and ex-situ biodiversity conservation. [10M]
OR
2. a. Discuss the key features of international environmental conventions such as Montreal Protocol and Kyoto Protocol. [10M]
b. What are the global environmental issues that impact ecosystem? [10M]

UNIT-II

3. a. Describe forest resource exploitation and its ecological impacts. [10M]
b. Discuss the causes for land degradation and soil erosion [10M]
OR
4. a. Analyze water resource issues such as floods, droughts, and dams [10M]
b. Discuss critically the importance of natural resource management in sustainable development. [10M]

UNIT-III

5. a. Give a detailed account on water pollution [10M]
b. Explain the Air Act, Water Act, and Environmental Protection Act (1986). [10M]
OR
6. a. Analyze the causes and control measures of air pollution. [10M]
b. Discuss about waste water treatment technologies. [10M]

UNIT-IV

7. a. Explain photovoltaic energy conversion and hydrogen production via water splitting. [10M]
b. Compare different renewable energy sources (solar, wind, biomass) in terms of efficiency and applicability. [10M]
OR
8. a. Evaluate the role of circular economy in waste management. [10M]
b. What are the environmental issues associated with conventional energy resources? [10M]

UNIT-V

9. a. Explain E-waste sources, characteristics, and management practices. [10M]
b. Discuss waste-to-energy technologies. [10M]
OR
10. a. Discuss various principles of sustainable development. [10M]
b. Evaluate the methods of E-waste processing and disposal. [10M]