

**Fourth Semester FYUGP Degree (Reg) Examination April
2026**

**KU4VACPHY102 - GREEN ENERGY FOR
SUSTAINABILITY**

2024 Admission onwards

Time : 1.5 hours

Maximum Marks : 50

Section A

Answer any 6 questions. Each carry 2 marks.

1. What is electrolysis of water ?
2. What is the main drawback of metal hydride storage ?
3. Name any two fast-growing renewable energy technologies.
4. Mention any two measures to tackle the energy crunch.
5. Mention any two organic waste used for biogas production.
6. Define mixing tank. What is the ratio of water to cow dung used?
7. What were the older applications of wind energy?
8. Name the two types of tides.

Section B

Answer any 4 questions. Each carry 6 marks.

9. Write a short note on biomass production.
10. Explain the concept of energy plantations.
11. Illustrate the working principle of a biogas plant with a neat explanation of each step involved.
12. What techniques should be applied for increased utilization of geothermal resource base?
13. Discuss environmental impacts of geothermal energy
14. How does tidal energy contribute to reducing dependence on conventional fossil fuels?

Section C

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Answer any 1 questions. Each carry 14 marks.

15. What are the uses of hydrogen energy. Explain in detail the applications of hydrogen energy in domestic, industrial and transport sectors.
16. What are conventional and non-conventional energy resources? Compare them with respect to availability, environmental impact, and sustainability.