



KERALA AGRICULTURAL UNIVERSITY
B. Tech. (Agrl. Engg.) 2024 Admission
IV Semester Final Examination – July 2026

REE 2201

Renewable Energy Sources (2+1)

Marks: 50
Time: 2 hours

I Define the following

(10x1=10)

1. Furling speed
2. Passive solar dryers
3. Tip Speed ratio

Fill in the blanks

4. Unit of energy is
5. Methane content of biogas is %
6. India ranks globally in total installed wind energy capacity.
7. The difference between high and low water levels is called of the tide.

State True or False

8. The system in which water is heated by contact with a hot rock is called Hydrothermal system.
9. About 70 per cent of the tide producing force is due to the Sun.
10. Net conversion efficiency of OTEC power generation system is higher than Wind power generation system.

II Write short notes on ANY FIVE of the following

(5x2=10)

1. Distinguish renewable energy sources with non-renewable sources.
2. Write the advantages and disadvantages of concentrating collectors over flat plate collectors.
3. Write the working principle of Solar photo voltaics.
4. Write short note on Wind farms.
5. List the factors to be considered for selection of site for wind energy conversion system.
6. List the advantages and disadvantages of biogas spent slurry.
7. Write short note on ocean thermal energy conversion.

III Answer ANY FIVE of the following

(5x4=20)

1. Discuss briefly on different energy sources.
2. Discuss briefly on standalone solar power station.
3. Discuss briefly on different applications of solar PV energy in agriculture.
4. Explain the different components of a wind energy conversion system for electricity generation.
5. Discuss briefly on different types of solar cells with their advantages and disadvantages.
6. Discuss briefly on power generation from biogas.
7. Discuss briefly on power generation from urban and municipal waste.

IV Write an essay on ANY ONE of the following

(1x10=10)

1. Discuss briefly on different solar energy conversion technologies.
2. Discuss briefly on different wind energy conversion technologies.
