

KERALA AGRICULTURAL UNIVERSITY

B.Sc. Hons (Ag.) 2013 Admission

VIIth Semester One Time Re - Examination - February 2017

Cat. No: Engg. 3204

Title: Renewable Energy (1+0)

Marks: 50.00

Time: 2 hours

I Fill up the blanks

(10x1=10)

1. ----- is the technology that converts cellulose to alcohol through fermentation.
2. ----- and ----- are examples of renewable forms of energy.
3. Value of Betz's coefficient is -----.
4. Contours of constant average wide velocity are called -----.
5. ----- is an instrument which measures beam radiation.
6. State the optimum pH and temperature needed for biogas production.
7. Define declination.
8. The instrument used for measuring wind velocity is -----.
9. The conversion of solar energy by various forms of plant and algae into organic material is known as -----.
10. A farm labour can develop an average power output of -----hp.

II Write short notes on any FIVE of the following

(5x2=10)

1. Solar photovoltaic principle
2. Pyrolysis
3. Solar pond
4. Biogas
5. Advantages and disadvantages of solar energy
6. Different methods/ processes of converting biomass into energy
7. Briquetting

III Short Essays on Any FIVE

(5x4=20)

1. Explain the different factors that affect biogas production.
2. What is a gasifier? Explain the different types of gasifiers available.
3. What are the different types of liquid biofuels? Explain how ethanol is produced from agricultural produce.
4. What is solidity? Explain the advantage of a high solidity wind mill.
5. Draw a flow diagram showing the different steps in biodiesel production process.
6. What are pros and cons of biomass utilization?
7. Write in brief the working of a solar cooker.

IV Write Essay on any ONE

(1x10=10)

1. What are the different solar energy applications? Explain any one of it with a neat sketch.
2. Write the prospects of application of renewable energy in India.
