

KERALA AGRICULTURAL UNIVERSITY

B.Sc. Hons (Ag) 2009 admission

VIth Semester Final Examination, June /July 2012

Cat. No: Eng.3204

Title: Renewable Energy (1+0)

Marks: 80

Time: 3hours

I. Fill up the blanks

(10x1 = 10)

1. A farm labour can develop an average power output of _____ hp.
2. The efficiency of petrol engine varies between _____ to _____ %.
3. Plant matter created by the process of _____ is called biomass.
4. During gas generation process in a biogas plant, the waste is digested initially by the bacteria called _____.
5. The equipment used to tap wind energy is called _____.
6. _____ are used to directly convert solar energy to electrical energy.
7. The temperature of Earth increases by about _____ °C/km while move towards the earth crust.
8. The wing in the ministry of India to develop and deploy new and renewable energy for supplementing the energy requirements of the country is _____.
9. Biodiesel is mainly made from _____ and _____.
10. Bioethanol is an alcohol made by the process of _____ of Cellulosic biomass.

II. Write short notes on ANY TEN

(10x3 = 30)

1. Flat Plate collector.
2. Geothermal Energy.
3. Bio-diesel.
4. Briquetting.
5. Savonius type rotor.
6. Energy conversion in solar pumping system.
7. Pyrolysis in gasifier.
8. Solar ponds.
9. Tracking.
10. Coefficient of performance of wind mill.
11. Chemical composition of biogas.
12. Semiconductors used in photovoltaic cells.

III. Write short essays on ANY SIX

(6x5 = 30)

1. Use of solar energy.
2. Components of wind mill.
3. Important sources of renewable energy.
4. What is tidal energy and how it can be tapped?
5. Digester in a biogas plant.
6. Briefly explain different types of liquid bio-fuels.
7. Differentiate burning and combustion.
8. List the energy sources from ocean.

IV. Write essay on ANY ONE

(1x10 = 10)

1. Explain the working of solar photovoltaic cells with neat sketch.
2. Explain the types of wind mills with neat sketches.