

# KERALA AGRICULTURAL UNIVERSITY

B.Tech.Food Engg. 2013 Admission

One Time Re-examination- II<sup>nd</sup> Semester January 2017

Cat. No: Elen.1201

Title: Basic Electrical Engineering (2+1)

Marks: 50

Time : 2 hours

## I. Fill up the blanks:

(10 x 1=10)

1. In star connection Phase voltage is equal to ----- line voltage.
2. The maximum value of power factor is -----
3. The value of domestic supply voltage is 230V. This figure represents ----- value.
4. The unit of inductance is -----
5. One unit of electricity is equivalent to -----
6. Decimal equivalent of binary number 11010 is -----
7. An LED is made up of a ----- junction.
8. A pure semiconductor without any doping is called -----
9. Power factor of pure resistive load is -----
10. Ripple factor for half wave rectifier is -----

## II. Write short notes on ANY FIVE:

(5x 2=10)

1. State Kirchoff's laws.
2. Explain law of electromagnetic induction.
3. What do you mean by RMS value.
4. What are the peculiarities of series circuit.
5. Explain DeMorgan's theorem
6. Find the binary equivalent of decimal number 56.
7. What is meant by self induced emf.

## III Write answers on ANY FIVE:

(5 x 4=20)

1. Explain with neat circuit diagram full wave bridge rectifier. Draw the input and output waveform.
2. Explain different types of heaters.
3. Draw and explain the V-I characteristics of SCR.
4. List the accessories for wiring.
5. Explain types of electrical tariff.
6. Explain the characteristics of zener diode.
7. Explain theory of operation of PNP transistor.

## IV. Write essay on any ONE

(1 x 10=10)

1. Explain and compare different transistor configurations.
2. Explain various passive components of electronics along with their types.

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