

# KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food . Engg) Degree Programme 2015 Admission

II<sup>nd</sup> Semester Final Examination- June – July 2016

Cat. No: Elen. 1201

Title: Basic Electrical Engineering (2+1)

Marks: 50.00

Time: 2 hours

Answer all questions

(10 x 1.0 = 10)

1. Collector base junction in PN junction is formed by \_\_\_\_\_
2. Current is measured by the unit \_\_\_\_\_
3. Cut in or threshold voltage for Silicon is \_\_\_\_\_
4. Power factor is defined as \_\_\_\_\_
5. SCR is used for \_\_\_\_\_

### True or False

6. Resistance of a conductor wire varies directly with its diameter .
7. The property of a magnetic material by which it opposes the establishment of magnetic flux is called reluctance.
8. Inductor is a device which stores electrical energy in electric field.
9. Energy is measured by the instrument ammeter..
10. Higher the SWG number, smaller is the diameter of wire.

Answer any five questions only

(5 x 2.0 =10)

Define the passive components of a circuit..

What is a PN junction diode and its practical usage

Explain the energy band diagram of materials.

Explain the mutual law of electro magnetic induction.

What is LED and where it is used.

Define DeMorgan s theorem

Write short notes on wiring plan.

Answer any five questions only

(5 x 4.0 =20)

Explain the input and output characteristics of NPN transistor

Explain about load estimation in a processing industry.

Explain the Net work theorems.

Differentiate between Single phase and three phase AC circuits.

Explain about various types of Logic gates..

What is a Zener diode and explain it briefly.

Explain about the electrical tariff and safety..

Answer any one question only

(1 x 10.0 =10)

a.Explain about the various special semi conductor devices..

b.Explain in detail about the star delta circuits.

a.Explain the power and energy measurement and load estimation in the processing industry.

b.Explain the working principle of SCR and its applications.