

# KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food.Engg) 2011 Admission

II<sup>nd</sup> Semester Special Re- Examination- June -2015

Cat. No: Elen.1201

Marks: 80,00

Title: Basic Electrical Engineering (2+1)

Time: 3 hours

## PART-I

ANSWER ALL QUESTIONS

(10x1:10)

1. Standard form of alternating voltage,  $e =$  \_\_\_\_\_.
2. The unit for magnetic flux intensity is \_\_\_\_\_.
3. In three phase system, the line voltages are separated by \_\_\_\_\_ electrical degree.
4. Resistance of wire always increases if \_\_\_\_\_ is increased.
5. The space between the poles of magnet is called \_\_\_\_\_.
6. The unit of reluctance of magnetic circuit is \_\_\_\_\_.
7. The standard supply frequency in Indian power distribution system is \_\_\_\_\_.
8. In any network, the algebraic sum of the current in all the wires meeting at a point is \_\_\_\_\_.
9. Whenever there is a change in the magnetic flux linked to a coil, \_\_\_\_\_ is induced.
10. In Fleming's left hand rule, thumb always represents the direction of \_\_\_\_\_.

## PART-II

ANSWER ANY TEN QUESTIONS

(10x3 = 30)

1. Differentiate between AC circuits and DC circuits
2. State Kirchoff's law of current and voltage
3. State self and mutual law of electro magnetic induction
4. Define RMS value and explain its importance
5. Differentiate between AC series and parallel circuits
6. List the accessories for wiring along with their specific purpose
7. List the different types of heaters and compare them

8. List the passive components of electric circuit and explain them
9. Explain the energy band diagrams of materials
10. Differentiate between half wave and full wave rectifiers
11. Explain the VI characteristics of SCR
12. Write short notes on Boolean theory

### **PART-III**

**ANSWER ANY SIX QUESTIONS**

**(6x5 = 30)**

1. Explain different gates by using Boolean expression and compare them
2. Explain the input and output characteristics of PNP transistor
3. What do you mean by Zener diode and explain its operation.
4. What do you mean by a filter and explain different types of filters
5. Explain the Thevenin's theorem and its applications.
6. Explain the load estimation of any one processing industry
7. Explain the electrical tariffs and safety
8. Explain the vectorial representation of AC series and parallel circuit's

### **PART-IV**

**ANSWER ANY ONE QUESTION**

**(1x10 =10)**

1. Explain the Star and Delta circuits with proper notations.
2. Explain the super position theorem and network work transformation