KERALA AGRICULTURAL UNIVERSITY

B.TECH (Food Engg) 2012 Admission

II[nd] Semester One-Time Special Re-Examination- June 2016

Cat.No: Elen. 1201 **Max mark: 80**

Title: Basic Electrical Engineering (2+1) **Time:3 hours**

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I. Fill up the blanks **(10 x1=10 marks)**

1. The number of cycles per second is called----------.
2. In a parallel circuit ---------- remains the same.
3. If current and voltage are out of phase by 90 degree , then power factor will be -----.
4. The unit of magnetic flux is --------.
5. The opposition offered by a substance to the flow of electric current is called --------.
6. Diode used as voltage regulator is ----------.
7. Decimal equivalent of binary 1101 is----------.
8. An undoped semiconductor is called ---------- semiconductor.
9. Number of PN junctions in SCR is ----------.
10. In a pure resistive circuit, frequency of current wave is --------- as that of the circuit frequency.

II. Write short notes/ answers on ANY TEN **(10 x 3=30 marks)**

1. State and explain Thevenin's theorem.
2. What is meant by self and mutual inductance.
3. What do you mean by average value of an AC quantity.
4. Explain three phase star connection.
5. List the accessories for wiring.
6. Explain zener diode.
7. Find the binary equivalent of decimal number 28.
8. Explain with an example DeMorgan's theorem.
9. What are different types of resistors used in electronics.
10. What are the different types of logic gates.
11. What is FET. Draw its circuit symbol.
12. Explain different types of Electrical tariff.

III. Answer any six questions **(6 x 5=30 marks)**

1. State and explain superposition theorem with an example.
2. Explain the terms: magnetic flux density, reluctance and inductance.
3. Explain V-I characteristics of SCR.
4. What is meant by power factor. What is its significance.
5. Give a comparison of different transistor configurations.
6. Explain energy band diagram for semiconductors.
7. With neat diagram explain PN junction diode.
8. What are the different representations of an AC.

IV. Write essay on ANY ONE **(1 x 10=10 marks)**

1. A. Explain Kirchoff's law with suitable example.
   B. Explain different types of heaters.

2. Explain with neat diagrams different types of rectifiers. Draw its input and output waveforms.

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