



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Food Engg.)
One-Time Re-Examination-January-2018
2014 Admission VII Semester
Basic Electrical Engineering (2+1)

Elen.1201

Marks: 50
Time: 2 hours
(10x1=10)

I Fill in the Blanks

- 1 According to KVL the algebraic sum of voltage drops and emfs around a closed path is----
- 2 The SI unit of Power and Energy are -----and-----
- 3 If the power factor of a circuit is unity, the reactive power consumed is-----
- 4 A p-n junction allows current flow when p-type material is more-----than n-type material
- 5 The process of adding impurities to an intrinsic semiconductor is called-----

State True or False

- 6 As the frequency increases in a series *RL* circuit the impedance also increases.
- 7 Resistance is inversely proportional to current.
- 8 The unit of magnetic flux density is *weber*.
- 9 Breakdown voltage and pinch-off voltage of a JFET are different terms for the same voltage level.
- 10 For a AND gate, if both inputs are ON, the output is ON.

II Write Short notes on any FIVE of the following

(5x2=10)

- 1 Define circuit and network,
- 2 What is reluctance?
- 3 State Kirchhoff's current law.
- 4 Define De Morgan's theorem.
- 5 Explain biasing of p-n junction.
- 6 List out internal wiring accessories.
- 7 Explain the characteristics of Zener diode.

III Answer any FIVE of the following.

(5x4=20)

- 1 Explain Thevenin's theorem. Write any one application.
- 2 State and explain Faraday's law of electromagnetic induction.
- 3 Explain rms and average value of an alternating current.
- 4 Write a short note on electric heaters.
- 5 Draw and explain a full wave diode bridge rectifier.
- 6 Explain SCR characteristics.
- 7 Explain about electrical tariff.

IV Write an essay on any ONE of the following

(1x10=10)

- 1 a State and explain Superposition Theorem.
b Explain about Star and Delta circuits.
- 2 a Explain the load estimation in a processing industry.
b Explain three types of transistor configurations.
