

B.A. / B.Com. / B.Sc.- I (NEP) Semester-II
SEC47 - Electronics - Fundamentals of Electronics

P. Pages : 1

Time : Two Hours



GUG/S/25/16438S

Max. Marks : 40

- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw neat and well-labelled diagrams wherever necessary.

1. a) Explain the concept of conductor and insulator with example. 8
OR
b) Explain the concept of voltage and current. 8
2. a) Explain the AC power generation with a suitable diagram and waveform. 8
OR
b) Explain- 8
i) Real power ii) Reactive Power
3. a) Explain the AC through the Pure inductance alone with a suitable diagram and waveform. 8
OR
b) Explain the AC through the RC circuit with a phasor diagram and derive the expression for its impedance. 8
4. a) Differentiate between AC and DC power supply. Explain the working of half-wave rectifier with a suitable diagram. 8
OR
b) Explain the concept of voltage and current source. 8
5. Attempt **any eight** of the following. 1x8
=8
a) What is a semiconductor?
b) What is the function of the ammeter?
c) State the advantage of a digital multimeter.
d) Define the peak value of AC waveform.
e) What is apparent power?
f) What is the power factor?
g) Draw a series RL ac circuit with proper notation.
h) Write the formula of impedance for series RL circuit.
i) When does the net reactance of RLC circuit is zero?
j) What is DC power?
k) Which circuit is used to convert ac into dc?
l) State Kirchoff's current law.
