Sardar Vallabhbhai Patel Institute of Technology -SVIT-Vasad

Academic Year:2021-22

First Year - Semester –I (Computer)

Subject Name: BASIC ELECTRONICS (3110016)

QUESTION BANK - TEST 2

Unit 1: Diode theory and application

Q:1 Explain all types of series clipping circuit with necessary waveforms.

Q:2 Explain positive and negative parallel clipping circuit with necessary waveforms.

Q:3 Explain biased positive and negative parallel clipping circuit with necessary waveforms.

Q:4 Explain combination parallel clipping circuit with necessary waveforms.

Q:5 Explain all types of clamper circuit with necessary waveforms.

Q:6 Determine the Vo for the network shown in figure 1

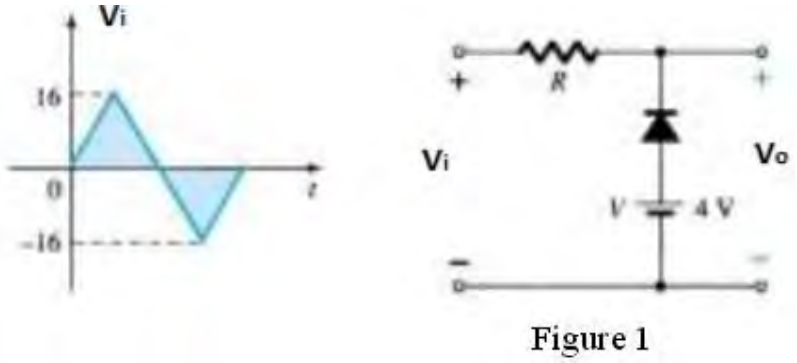

Figure 1

Q:7 Explain the difference between clipping and clamping circuit.

Q:8 A positive voltage clamping circuit and a positive voltage clipping circuit each have ±12 V square Wave input. Sketch the output waveform for each circuit.

Q:9 Draw and explain voltage multiplier circuit.

Unit 2 : Bipolar junction transistor and its biasing

Q:1 Mention the essentials of biasing circuit.

Q:2 State various methods used for transistor biasing. State their advantages and disadvantages.

Q:3 Describe the voltage divider biasing circuit in detail.

Q:4 Discuss stability factor for voltage divider bias circuit.

Q:5 A short note on collector feedback resistor.

Q:6 How variation in temperature changes location of Q point on DC load line.

Unit 3: Special Purpose diodes and transistors

Q:1 Explain LED diode.

Q:2 Why Zener diode can be used as voltage regulator? Explain Zener as voltage regulator with necessary diagram.

Q:3 What is zener breakdown? What is avalanche breakdown? Compare both the type of breakdown.

Q:4 Draw and explain seven segment display for common anode and common cathode configuration.

Q:5 Draw and explain sixteen segment display.

Q:6 Draw and explain dot matrix LED display.