

Question Bank (G scheme)

Name of subject: BASIC ELECTRONICS & MECHATRONICS Unit Test :I

Subject code : 17302

Course : ME

Semester: III

CHAPTER 1 –MARKS 3

1. Define intrinsic and extrinsic semiconductor. Give examples of trivalent and pentavalent impurities.
2. Draw symbol and VI characteristics of pn junction Diode
3. Draw symbols for SCR , UJT, TRIAC
4. Define Breakdown voltage and Knee voltage in PN junction diode.
5. What are effects of temperature on Semiconductors?

CHAPTER 2 –MARKS 3

1. Define line and load regulation.
2. Define Ripple factor and efficiency of rectifier.
3. Draw block diagram of regulated power supply.
4. Draw block diagram of OFF Line UPS.
5. What is Amplifier? Draw block diagram of Amplifier.

CHAPTER 1 –MARKS 4

1. Draw and explain PN junction in Forward bias and Reverse bias.
2. Draw and explain Valence band, conduction band and energy gap for semiconductors.
3. Compare FET with BJT (any four points).
4. Draw a labeled V-I characteristics of UJT. Define peak point and valley point.
5. Draw the circuit diagram of Half wave rectifier and explain its working with waveforms.

6. Compare Half wave rectifier, Full wave center tapped transformer rectifier & Bridge rectifier.

CHAPTER 2 –MARKS 4

1. Draw the circuit diagram of Bridge rectifier and explain its working with waveforms.
2. Draw the circuit diagram of Full wave center tapped transformer rectifier and explain its working with waveforms.
3. What are types of filters? Draw LC filter with full wave rectifier. Also draw its waveform.
4. Explain series or shunt voltage regulator with block diagram.
5. Draw and explain RC coupled amplifier.
6. How transistor is used as Voltage Amplifier?