28 Lecture - PHY301

Important Mcqs

Which of the following materials is commonly used to create the p-type region of a PN junction diode?

A. Arsenic

B. Boron

C. Phosphorus

D. Silicon

Answer: B. Boron

What happens to the majority carriers in the depletion region of a PN junction diode?

A. They are attracted to each other

B. They are repelled from each other

C. They remain stationary

D. They move randomly

Answer: B. They are repelled from each other

What is the typical forward voltage drop of a silicon PN junction diode?

A. 0.1 volts

B. 0.3 volts

C. 0.5 volts

D. 0.7 volts

Answer: D. 0.7 volts

What is the reverse breakdown voltage of a PN junction diode?

A. The voltage at which the diode conducts in the reverse direction

B. The maximum voltage that can be applied in the forward direction

C. The maximum voltage that can be applied in the reverse direction without damaging the diode

D. The voltage at which the diode breaks down and conducts in the reverse direction

Answer: D. The voltage at which the diode breaks down and conducts in the reverse direction

Which of the following applications uses a PN junction diode as a voltage regulator?

A. Power amplifier

B. Voltage multiplier

C. Oscillator

D. Rectifier

Answer: B. Voltage regulator

Which of the following types of diodes emits light when forward biased?

A. Zener diode

B. Schottky diode

C. Varactor diode

D. Light-emitting diode

Answer: D. Light-emitting diode

What is the function of a rectifier circuit using a PN junction diode?

A. To convert AC voltage to DC voltage

B. To amplify a signal

C. To filter out unwanted frequencies

D. To regulate voltage

Answer: A. To convert AC voltage to DC voltage

What happens to the current through a PN junction diode when it is reverse biased?

A. It decreases exponentially with increasing reverse voltage

B. It increases linearly with increasing reverse voltage

C. It remains constant

D. It increases exponentially with increasing reverse voltage

Answer: A. It decreases exponentially with increasing reverse voltage

Which of the following is a characteristic of a PN junction diode in reverse bias?

A. High resistance

B. Low resistance

C. No resistance

D. Infinite resistance

Answer: A. High resistance

Which of the following is a characteristic of a PN junction diode in forward bias?

A. High resistance

B. Low resistance

C. No resistance

D. Infinite resistance

Answer: B. Low resistance