

# 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**