42 Lecture - PHY301

Important Mcqs

What is the voltage drop across the collector-emitter junction in a BJT when it is operating in the active region?

- a. approximately zero
- b. approximately 0.2 volts
- c. approximately 0.6 volts
- d. approximately the same as the supply voltage

Answer: c. approximately 0.6 volts

In a common emitter BJT configuration, which of the following currents flow in the collector-emitter loop?

- a. only the collector current
- b. only the base current
- c. only the emitter current
- d. both the collector and emitter currents

Answer: d. both the collector and emitter currents

What is the purpose of the collector resistor in a BJT circuit?

- a. to limit the base current
- b. to provide negative feedback
- c. to stabilize the bias point
- d. to provide a load for the transistor

Answer: d. to provide a load for the transistor

What is the typical value of the collector current in a BJT operating in the active region?
a. microamps
b. milliamps
c. amps
d. tens of amps
Answer: b. milliamps
Which of the following is true about the direction of the collector current in a PNP transistor?
a. it flows from the emitter to the collector
b. it flows from the collector to the emitter
c. it flows in both directions
d. it does not flow in a PNP transistor
Answer: a. it flows from the emitter to the collector
What is the direction of the voltage drop across the collector-emitter junction in a BJT operating in the active region?
a. positive on the collector and negative on the emitter
b. negative on the collector and positive on the emitter
c. positive on both the collector and emitter
d. negative on both the collector and emitter
Answer: b. negative on the collector and positive on the emitter

Which of the following is true about the direction of the base current in a BJT?

- a. it flows from the emitter to the collector
- b. it flows from the collector to the emitter

- c. it flows in both directions
 d. it does not flow in a BJT
- Answer: b. it flows from the collector to the emitter

In a common base BJT configuration, which of the following currents flow in the collector-emitter loop?

- a. only the collector current
- b. only the base current
- c. only the emitter current
- d. both the collector and emitter currents

Answer: a. only the collector current

What is the typical value of the voltage drop across the base-emitter junction in a BJT operating in the active region?

- a. approximately zero
- b. approximately 0.2 volts
- c. approximately 0.6 volts
- d. approximately the same as the supply voltage

Answer: c. approximately 0.6 volts

Which of the following is true about the direction of the emitter current in a BJT?

- a. it flows from the emitter to the collector
- b. it flows from the collector to the emitter
- c. it flows in both directions
- d. it does not flow in a BJT

Answer: a. it flows from the emitter to the collector