

# 41 Lecture - PHY301

## Important Subjective

**What is the direction of base current in an NPN BJT?**

**Answer:** The direction of base current in an NPN BJT is from the emitter to the base.

**What is the direction of collector current in an NPN BJT?**

**Answer:** The direction of collector current in an NPN BJT is from the collector to the emitter.

**What is the direction of emitter current in an NPN BJT?**

**Answer:** The direction of emitter current in an NPN BJT is from the emitter to the collector.

**What is the direction of base current in a PNP BJT?**

**Answer:** The direction of base current in a PNP BJT is from the base to the emitter.

**What is the direction of collector current in a PNP BJT?**

**Answer:** The direction of collector current in a PNP BJT is from the emitter to the collector.

**What is the direction of emitter current in a PNP BJT?**

**Answer:** The direction of emitter current in a PNP BJT is from the collector to the emitter.

**What is the significance of the direction of base current in an NPN BJT?**

**Answer:** The direction of base current in an NPN BJT determines the amount of collector current that flows through the device.

**Why is the direction of emitter current in an NPN BJT opposite to that of a PNP BJT?**

**Answer:** The direction of emitter current in an NPN BJT is opposite to that of a PNP BJT because the majority carriers in the emitter region of an NPN BJT are electrons, while in a PNP BJT, they are holes.

**What is the significance of the direction of collector current in a PNP BJT?**

**Answer:** The direction of collector current in a PNP BJT determines the amount of emitter current that flows through the device.

**Why is the direction of base current in a PNP BJT opposite to that of an NPN BJT?**

**Answer:** The direction of base current in a PNP BJT is opposite to that of an NPN BJT because the PNP BJT is a minority carrier device, which means that it operates with holes as the majority carrier in the base region, unlike an NPN BJT which operates with electrons as the majority carrier.