Inductors, Diodes and Transistor Multiple Choice Questions

1. What is the SI unit of measurement for inductance?

a) Volts

b) Farads

c) Henrys

d) Ohms

Correct answer: c) Henrys

2. In a standard diode, which pin is typically the cathode?

a) Pin 1

b) Pin 2

c) Pin 3

d) Pin 4

Correct answer: b) Pin 2

3. In a bipolar junction transistor (BJT), what are the three pins typically labeled as?

a) Emitter, Collector, Base

b) Source, Drain, Gate

c) Cathode, Anode, Gate

d) Drain, Source, Emitter

Correct answer: a) Emitter, Collector, Base

4. Which direction does current flow through a forward-biased diode?

a) From anode to cathode

b) From cathode to anode

c) It doesn't conduct in forward bias

d) It flows randomly between anode and cathode

Correct answer: a) From anode to cathode

5. What is the correct biasing condition for a transistor to operate in the active region?

a) Reverse bias

b) Forward bias

c) Zero bias

d) Active bias

Correct answer: c) Zero bias

6. What is the typical unit for the base-emitter voltage (VBE) in a transistor?

a) Amperes

b) Volts

c) Watts

d) Farads

Correct answer: b) Volts

7. In an inductor, what does the direction of the current determine?

a) The resistance

b) The voltage drop

c) The inductance

d) The capacitance

Correct answer: c) The inductance

8. What is the unit of measurement for the time constant of an inductor-capacitor (LC) circuit?

a) Ohms

b) Farads

c) Seconds

d) Henrys

Correct answer: c) Seconds

9. Which pin of a transistor controls the flow of current between the other two pins?

a) Emitter

b) Collector

c) Base

d) Drain

Correct answer: c) Base

10. What is the direction of induced voltage across an inductor when the current passing through it is increasing?

a) The induced voltage opposes the increase in current

b) The induced voltage supports the increase in current

c) The induced voltage is zero

d) The induced voltage flows in the same direction as the current

Correct answer: a) The induced voltage opposes the increase in current