

QUIZ – ANSWER KEY

QUIZ NO: 133

TOPIC: ELECTRICAL ENGINEERING

DATE: 09/12/2022

1. A power transistor is a ?

- [A] three layer, three junction device
- [B] three layer, two junction device
- [C] two layer, one junction device
- [D] four layer, three junction device

Answer: B

2. For a power transistor, if the base current I_B is increased keeping V_{CE} constant, then ?

- [A] I_C increases
- [B] I_C decreases
- [C] I_C remains constant
- [D] None of the mentioned

Answer: A

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3. For a power transistor, if the forward current gain $\alpha = 0.97$, then $\beta = ?$

- [A] 0.03
- [B] 2.03
- [C] 49.24
- [D] 32.33

Answer: D

4. The power electronics devices have a very high efficiency because ?

- [A] forward voltage rating
- [B] switching losses
- [C] thermal conductivity
- [D] heat Sink arrangements

Answer: B

5. Let's say that a transistor is operating at the middle of the load line, then a decrease in the current gain would ?

- [A] move the Q point up
- [B] move the Q point down
- [C] result in to & fro motion of the Q point
- [D] not change the Q point

Answer: B

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6. A thyristor (SCR) is a ?

- [A] P-N-P device
- [B] N-P-N device
- [C] P-N-P-N device
- [D] P-N device

Answer: C

7. Which terminal does not belong to the SCR ?

- [A] Anode
- [B] Gate
- [C] Base
- [D] Cathode

Answer: C

8. Choose the false statement ?

- [A] SCR is a bidirectional device
- [B] SCR is a controlled device
- [C] In SCR the gate is the controlling terminal
- [D] SCR are used for high-power applications

Answer: A

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9. For an SCR in the forward blocking mode (practically) ?

- [A] leakage current does not flow
- [B] leakage current flows from anode to cathode
- [C] leakage current flows from cathode to anode
- [D] leakage current flows from gate to anode

Answer: B

10. With the anode positive with respect to the cathode & the gate circuit open, the SCR is said to be in the?

- [A] reverse blocking mode
- [B] reverse conduction mode
- [C] forward blocking mode
- [D] forward conduction mode

Answer: C

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