QUIZ – ANSWER KEY

QUIZ NO: 78

TOPIC: ELECTRICAL ENGINEERING

DATE: 31/05/2022

1. In which region does BJT act as the OFF switch in electronic circuits?

   [A] Cut-off

   [B] Saturation

   [C] Active

   [D] Reverse saturation

   Answer: B

2. The potential taken between two points across a resistor will be

   [A] Positive

   [B] Negative

   [C] Zero

   [D] Infinity

   Answer: B

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3. The voltage at any point in an ac circuit will be

   [A] Peak voltage

   [B] RMS voltage

   [C] Average voltage

   [D] Source voltage

   Answer: B

4. If the charge in a conductor is 16C and the area of cross section is $4m^2$. Calculate the electric flux density.

   [A] $64C/m^2$

   [B] $16C/m^2$

   [C] $4C/m^2$

   [D] $2C/m^2$

   Answer: C

5. What is the electric flux density in free space if the electric field intensity is 1V/m?

   [A] 7.76*10-12C/m2

   [B] 8.85*10-12C /m2

   [C] 1.23*10-12C /m2

   [D] 3.43*10-12C /m2

   Answer: B

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6. Which of the following is the correct order of turn-off times?

[A] MOSFET < BJT < IGBT < SCR

[B] MOSFET < IGBT < BJT < SCR

[C] SCR < BJT < IGBT < MOSFET

[D] BJT < MOSFET < IGBT < SCR

Answer: A

7. Which of the following is the correct expression of current in an intrinsic semiconductor electronic circuit?

[A] ITotal = Ie + Ih

[B] ITotal = Ie – Ih

[C] ITotal = Ie + 2Ih

[D] ITotal = 2Ie + Ih

Answer: A

8. An electronic circuit wire of conductivity 5.8 × 107 mho-m is subjected to an electric field of 40 mV/m. What will be its current density?

[A] 2.32 × 106 A/m2

[B] 1.16 × 106 A/m2

[C] 4.64 × 106 A/m2

[D] 4.30 × 106 A/m2

Answer: A

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9. In which of the following region does BJT act as the amplifier electronic device?

[A] Cut-off
[B] Saturation
[C] Active
[D] Reverse saturation

Answer: C

10. Which of the following is correct about Hall Effect in electronic circuits?

[A] Hall voltage is very weak in metals as compared to semiconductors
[B] Hall voltage is directly proportional to the charge density
[C] Hall voltage is inversely proportional to the intensity of the magnetic field
[D] Intrinsic semiconductor has a positive temperature coefficient of hall constant

Answer: A