MCQ BASIC ELECTRONICS

Q1. A transistor has ……

1. one pn junction
2. two pn junctions
3. three pn junctions
4. four pn junctions

Answer : 2

Q2. The number of depletion layers in a transistor is ……

1. four
2. three
3. one
4. two

Answer : 4

Q3. The base of a transistor is …….. doped

1. heavily
2. moderately
3. lightly
4. none of the above

Answer : 3

Q4. The element that has the biggest size in a transistor is ……..

1. collector
2. base
3. emitter
4. collector-base-junction

Answer : 1

Q5. In a pnp transistor, the current carriers are …….

1. acceptor ions
2. donor ions
3. free electrons
4. holes

Answer : 4

Q6. The collector of a transistor is ……. doped

1. heavily
2. moderately
3. lightly
4. none of the above

Answer : 2

Q7. A transistor is a …… operated device

1. current
2. voltage
3. both voltage and current
4. none of the above

Answer : 1

Q6. The collector of a transistor is ……. doped

1. heavily

2. moderately
3. lightly
4. none of the above

Answer : 2

Q7. A transistor is a …… operated device

1. current
2. voltage
3. both voltage and current
4. none of the above

Answer : 1

Q8. In a npn transistor, ……. are the minority carriers

1. free electrons
2. holes
3. donor ions
4. acceptor ions

Answer : 2

Q9. The emitter of a transistor is …… doped

1. lightly
2. heavily
3. moderately
4. none of the above

Answer : 2

Q10. In a transistor, the base current is about …….. of emitter current

1. 25%
2. 20%
3. 35 %
4. 5%

Answer : 4

Q11. At the base-emitter junctions of a transistor, one finds ……

1. a reverse bias
2. a wide depletion layer
3. low resistance
4. none of the above

Answer : 3

Q12. The input impedance of a transistor is …….

1. high
2. low
3. very high
4. almost zero

Answer : 2

Q13. Most of the majority carriers from the emitter ……..

1. recombine in the base
2. recombine in the emitter
3. pass through the base region to the collector
4. none of the above

Answer :3

Q14. The current I_B is ……

1. electron current
2. hole current
3. donor ion current
4. acceptor ion current

Answer : 1

Q15. In a transistor ……..

$I_C = I_E + I_B$

$I_B = I_C + I_E$

$I_E = I_C – I_B$

$I_E = I_C + I_B$

Answer : 4

Q16. The value of α of a transistor is …….

- more than 1
- less than 1
- 1
- none of the above

Answer : 2

Q17. $I_C = \alpha I_E$ + ……..

1. I_B
2. I_{CEO}
3. I_{CBO}
4. βI_B

Answer : 3

Q18. The output impedance of a transistor is ……..

1. high
2. zero
3. low
4. very low

Answer : 1

Q19. The relation between β and α is ……..

$\beta = 1 / (1 – \alpha)$

1. $\beta = (1 – \alpha) / \alpha$
2. $\beta = \alpha / (1 – \alpha)$
3. $\beta = \alpha / (1 + \alpha)$

Answer : 3