Q1. The most commonly used semiconductor in the manufacture of a transistor is …….

1. germanium
2. silicon
3. carbon
4. none of the above

Answer : 2

Q2. The collector-base junction in a transistor has ……..

1. forward bias at all times
2. reverse bias at all times
3. low resistance
4. none of the above

Answer : 2

Q3. When transistors are used in digital circuits they usually operate in the …….

1. active region
2. breakdown region
3. saturation and cutoff regions
4. linear region

Answer : 3

Q4. Three different Q points are shown on a dc load line. The upper Q point represents the …….

1. minimum current gain
2. intermediate current gain
3. maximum current gain
4. cutoff point

Answer : 3

Q5. A current ratio of I_C/I_E is usually less than one and is called ……

1. beta
2. theta
3. alpha
4. omega

Answer : 3

Q6. With the positive probe on an NPN base, an ohmmeter reading between the other transistor terminals should be ……

1. open
2. infinite
3. low resistance
4. high resistance

Answer : 3

Q7. In a CE configuration, an emitter resistor is used for ……

1. stabilization
2. ac signal bypass
3. collector bias
4. higher gain

Answer : 1

Q8. Voltage-divider bias provides …….

1. an unstable Q point
2. a stable Q point
3. a Q point that easily varies with changes in the transistor's current gain
4. a Q point that is stable and easily varies with changes in the transistor's current gain

Answer : 2

Q9. To operate properly, a transistor's base-emitter junction must be forward biased with reverse bias applied to which junction?

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

Answer : 4

Q10. The C-B configuration is used to provide which type of gain?

1. voltage
2. current
3. resistance
4. power

Answer : 1

Q11. The Q point on a load line may be used to determine ……

1. V_C
2. V_{CC}
3. V_B
4. I_C

Answer : 3

Q12. Beta's current ratio is ……..

1. I_C/I_B
2. I_C/I_E
3. I_B/I_E
4. I_E/I_B

Answer: 1

Q13. Most of the electrons in the base of an NPN transistor flow ……

1. out of the base lead
2. into the collector
3. into the emitter
4. into the base supply

Answer: 2

Q14. In a transistor, collector current is controlled by ……..

1. collector voltage
2. base current
3. collector resistance
4. all of the above

Answer: 2

Q15. Total emitter current is ……

1. $I_E - I_C$
2. $I_C + I_E$
3. $I_B + I_C$

4. $I_B - I_C$

Answer: 3

Q16. For a CC configuration to operate properly, the collector-base junction should be reverse biased, while forward bias should be applied to …… junction.

1. collector-emitter
2. base-emitter
3. collector-base
4. cathode-anode

Answer: 1

Q17. The input/output relationship of the common-collector and common-base amplifiers is ……..

1. 270 degrees
2. 180 degrees
3. 90 degrees
4. 0 degrees

Answer: 4

Q18. Which is the higher gain provided by a CE configuration?

1. voltage
2. current
3. resistance
4. power

Answer: 4

Q19. A semiconductor is formed by …… bonds.

1. Covalent
2. Electrovalent
3. Co-ordinate
4. None of the above

Answer : 1

Q20. A semiconductor has …… temperature coefficient of resistance.

1. Positive
2. Zero
3. Negative
4. None of the above

Answer : 3