

Question 1 Choose the below option in terms of ascending order of band gap energy

- a. Diamond, Graphite, Silicon
- b. Graphite, Silicon, Diamond
- c. Silicon, Graphite, Diamond
- d. Silicon, Diamond, Graphite

Question 2 Carrier lifetime for holes and electrons in a semiconductor ranges from –

- a. Milliseconds to hundreds of nanoseconds
- b. Microseconds to seconds
- c. Nanoseconds to hundreds of microseconds
- d. Nanoseconds to thousands of milliseconds

Question 3 Transport of charge carriers in semiconductor is achieved through:

- a. Conduction and Diffusion
- b. Conduction
- c. Diffusion
- d. None of the above

Question 4 The thickness of space charge region for a P-N junction diode is of the order of :-

- a. 10^{-4} cm
- b. 10^{-2} cm
- c. 10 cm
- d. 100 cm

Question 5 Formation of a junction between a sample of P-type and N-type material causes _____ action

- a. Rectifying
- b. Conducting
- c. Insulating
- d. None of the above

Question 6 Cut-In or breakdown voltage of Silicon diode is greater than that of Germanium diode because _____.

- a. Reverse saturation current in a Silicon diode is lesser than that in Germanium diode
- b. Reverse saturation current in Germanium diode is lesser than that in Silicon diode
- c. The current is initially less dependent on voltage for a Silicon diode

- d. None of the above

Question 7 The d.c. resistance of a crystal diode is its a.c. resistance

- a. The same as
- b. More than
- c. Less than
- d. None of the above

Question 8 A crystal diode is used as

- a. an amplifier
- b. a rectifier
- c. an oscillator
- d. a voltage regulator

Question 9 Band gap Energy for Silicon and Germanium at Room Temperature (300°K) are ____ & ____ respectively

- a. 56eV, 1.1eV
- b. 72eV, 1.2eV
- c. 1eV, 0.72eV
- d. 1eV, 0.56eV

Question 10 Depletion layer in semiconductor diode is caused by

- a. Doping
- b. Recombination
- c. Barrier potential
- d. Ions

Question 11 Zener diode can be described as

- a. A rectifier diode.
- b. A device with constant – voltage.
- c. A device with constant – current.
- d. A device that works in the forward region.

Question 12 Voltage multipliers produce

- a. Low voltage and low current
- b. Low voltage and high current
- c. High voltage and low current
- d. High voltage and high current

Question 13 A Diode is a

- a. Bilateral Device
- b. Nonlinear Device
- c. Linear Device
- d. Unipolar Device

Question 14 What is a Clamper?

- a. A circuit that adds a DC voltage (positive or negative) to a wave
- b. A circuit that adds a AC voltage (positive or negative) to a wave
- c. A circuit that removes a part (positive or negative) of a waveform
- d. All of the above

Question 15 What is a Clipper?

- a. circuit that adds a DC voltage (positive or negative) to a wave
- b. A circuit that adds a AC voltage (positive or negative) to a wave
- c. A circuit that removes a part (positive or negative) of a waveform
- d. All of the above

Question 16 The reverse saturation current in a Silicon Diode is _____ than that of Germanium Diode

- a. Equal
- b. Higher
- c. Lower
- d. Depends on temperature

Question 17 The forward voltage drop across a silicon diode is about

- a. 2.5 V
- b. 3 V
- c. 10 V

d. 0.7 V

Question 18 A zener diode has

- a. one pn junction
- b. two pn junctions
- c. three pn junctions
- d. none of the above

Question 19 A zener diode is used as

- a. an amplifier
- b. a voltage regulator
- c. a rectifier
- d. a multivibrator

Question 20 A zener diode is always connected.

- a. reverse
- b. forward
- c. either reverse or forward
- d. none of the above

Question 21 A zener diode utilizes characteristics for its operation.

- a. forward
- b. reverse
- c. both forward and reverse
- d. none of the above

Question 22 A zener diode has breakdown voltage

- a. undefined
- b. sharp
- c. zero
- d. none of the above

Question 23 A zener diode is Device

- a. a non-linear
- b. a linear
- c. an amplifying
- d. none of the above

Question 24 rectifier has the lowest forward resistance

- a. solid state
- b. vacuum tube
- c. gas tube
- d. none of the above

Question 25 A series resistance is connected in the zener circuit to.....

- a. properly reverse bias the zener
- b. protect the zener
- c. properly forward bias the zener
- d. none of the above

Question 26 The disadvantage of a half-wave rectifier is that the.....

- a. components are expensive
- b. diodes must have a higher power rating
- c. output is difficult to filter
- d. none of the above

Question 27 The Hall effect is used to determine the

- a. Only the carrier concentration of semiconductors
- b. Current flowing across a semiconductor
- c. Type of semiconductor and carrier concentration
- d. None of the above

Question 28 The ripple factor of a half-wave rectifier is

- a. 2
- b. 1.21
- c. 2.5
- d. 0.4

Question 29 For the same secondary voltage, the output voltage from a center-tap rectifier is than that of bridge rectifier

- a. twice
- b. thrice
- c. four time
- d. one-half

Question 30 There is a need of transformer for

- a. half-wave rectifier
- b. Centre-tap full-wave rectifier
- c. bridge full-wave rectifier
- d. none of the above

Question 31 For the same secondary voltage, the output voltage from a centre-tap rectifier is than that of bridge rectifier

- a. twice
- b. thrice
- c. four time
- d. one-half

Question 32 The PIV rating of each diode in a bridge rectifier is that of the equivalent centre-tap rectifier

- a. one-half
- b. the same as
- c. twice
- d. four times

Question 33 A 10 V power supply would use as filter capacitor.

- a. paper capacitor
- b. mica capacitor
- c. electrolytic capacitor
- d. air capacitor

Question 34 A 1,000 V power supply would use as a filter capacitor

- a. paper capacitor
- b. air capacitor
- c. mica capacitor
- d. electrolytic capacitor

Question 35 The most widely used rectifier is

- a. half-wave rectifier
- b. centre-tap full-wave rectifier
- c. bridge full-wave rectifier
- d. none of the above

Question 36 The maximum efficiency of a half-wave rectifier is

- a. 40.6 %
- b. 81.2 %
- c. 50 %
- d. 25 %

Question 37 The filter circuit results in the best voltage regulation

- a. choke input
- b. capacitor input
- c. resistance input
- d. none of the above

Question 38 A register with color bands: Yellow-Violet-Red, gold, has the value:

- a. 47k 5%

- b. 4k7 5%
- c. 470R 5%
- d. 47R 5%

Question 39 The voltage out of an ideal voltage source is

- a. Zero
- b. Constant
- c. Load resistance dependent
- d. Internal resistance dependent

Question 40 The voltage out of an ideal current source is

- a. Zero
- b. Constant
- c. Load resistance dependent
- d. Internal resistance dependent

Question 41 The path between two points along which an electrical current can be carried is called

- a. A network
- b. A relay
- c. A circuit
- d. A loop

Question 42 If the Zener Diode is connected in wrong polarity, the voltage across the load is

- a. 0.7 V
- b. 10 V
- c. 14 V
- d. 18 V

Question 43 What is the tolerance of a resistor having sliver tolerance band

- a. 10%
- b. 5%

- c. 20%
- d. 2%

Question 44 PCB stands for

- a. Proper circuit board
- b. Printed circuit board
- c. Printed circle board
- d. Printed circuit bond

Question 45 The chemical compound used for etching of PCB is

- a. Ferrous sulphate
- b. Ferric chloride
- c. Copper sulphate
- d. None of the above

Question 46 The specified deviation in the resistant value of a resister is called

- a. Capacitance
- b. Tolerance
- c. Inductance
- d. Color code

Question 47 Material classified as good conductors of electricity if

- a. The conduction and valence bands overlap
- b. There is a narrow forbidden, energy gap
- c. There is a wide forbidden, energy gap
- d. None of the above

Question 48 ----- is an electronics component that opposes the flow of current

- a. Capacitor
- b. Resistor
- c. Inductor

d. None of the above

Question 49 A resistor has the following color bands- yellow, violet, orange, silver. Its value will be

a. $4.7 \pm 10\%$

b. $47 \pm 5\%$

c. $47k \pm 10\%$

d. None of the above

Question 50 The number of holes in an intrinsic semiconductor is

a. Equal to number of free electrons

b. Greater than number of free electrons

c. Less than number of free electrons

d. None of the above

www.quick-learn.in