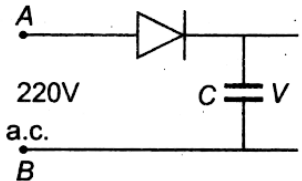


PHYSICS

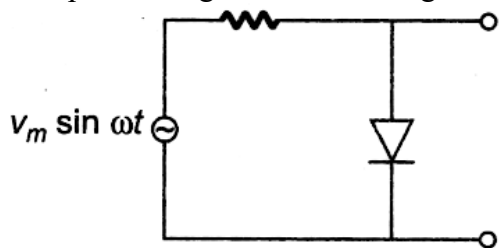
- At absolute zero temperature a semiconductor behaves like
 - (1) an insulator
 - (2) a super conductor
 - (3) a good conductor
 - (4) a variable resistor
- The resistivity of a semiconductor:
 - (1) increases as the temperature increases
 - (2) decreases as the temperature increases
 - (3) remains constant even when temperature varies
 - (4) none of the above

- A 200 V AC supply is connected between points A and B figure. What will be the potential difference V across the capacitor?
 - (1) 220 V
 - (2) 110 V
 - (3) 0 V
 - (4) $220\sqrt{2}$



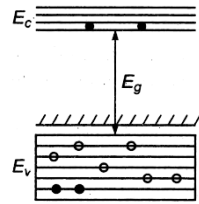
- Hole is
 - (1) an anti-particle of electron
 - (2) a vacancy created when an electron leaves a covalent bond
 - (3) absence of free electrons
 - (4) an artificially created particle

- The output of the given circuit in figure.



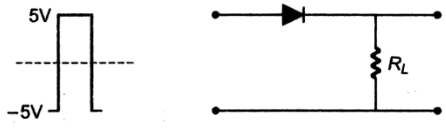
- (1) would be zero at all times.
- (2) would be like a half-wave rectifier with positive cycles in output.
- (3) would be like a half-wave rectifier with negative cycles in output.
- (4) would be like that of a full-wave rectifier.

- In the energy band diagram of a material shown below, the open circles and filled circles denote holes and electrons respectively. The material is a/an



- (1) p-type semiconductor
- (2) insulator
- (3) metal
- (4) n-type semiconductor

- If in a p-n junction diode, a square input signal of 10 V is applied as shown



Then the output signal across R_L will be

- (1)
- (2)
- (3)
- (4)

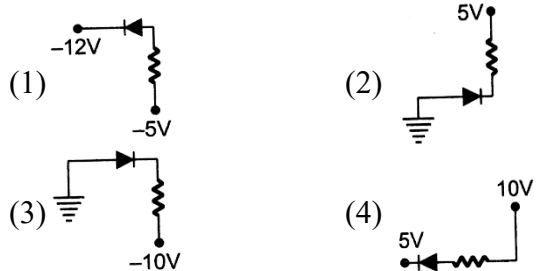
- In a p-n junction the depletion layer of thickness 10^{-6} m has potential across it is 0.1 V. The electric field is ($V m^{-1}$)

- (1) 10^7
- (2) 10^{-6}
- (3) 10^{+5}
- (4) 10^{-5}

- If a full-wave rectifier circuit is operating from 50 Hz mains, the fundamental frequency in the ripple will be

- (1) 25 Hz
- (2) 50 Hz
- (3) 70.7 Hz
- (4) 100 Hz

- In given diagram which p-n junction is reverse biased?



NEET 220 Medical Seats out of 240