

GATE 2024 ECE Daily Practice Questions

Question 1: A $100\text{ cm} \times 32\text{ cm}$ rectangular sheet is folded 5 times. Each time the sheet is folded, the long Edge aligns with its opposite side. Eventually, the folded sheet is a rectangle of dimension $100\text{ cm} \times 1\text{ cm}$. The total number of creases visible when the sheet is unfolded is

- (a) 32
- (b) 63
- (c) 31
- (d) 5

Question 2: When I was a kid, I was partial to stories about other worlds and interplanetary travel. I used to imagine that I could just gaze off into space and be whisked to another planet.

- (a) It is an adult's memory of what he or she liked as a child.
- (b) The child in the passage read stories about interplanetary travels only in parts.
- (c) It is a child's description of what he or she likes.
- (d) It teaches us that stories are good for children.

Question 3: In a semiconductor, if fermi energy level lies in the conduction band, then the semiconductor is known as.

- (a) Degenerative n-type
- (b) Non-degenerate n-type
- (c) Degenerative p-type
- (d) Non-degenerate n-type

Question 4: In a class of 100 students

- (i) There are 30 students who neither like romantic movies nor comedy movies.
- (ii) Number of students who like romantic movies is twice the number of students who like comedy movies and
- (iii) The number of students who like both romantic movies and comedy moves is 20

How many students in the class like romantic movies

- (a) 60
- (b) 30
- (c) 40
- (d) 20

Question 5: A single crystal intrinsic semiconductor is at a temperature of 300 K with an effective density of states for holes twice that of electrons. The thermal voltage is 26 mV. The intrinsic Fermi level is shifted from the mid-bandgap energy level by

- (a) 18.02 meV.
- (b) 9.01 meV.
- (c) 13.45 meV.
- (d) 26.90 meV.