

CL32_Q1. What is meant by effective mass of electron?

CL32_Q2. The “effective mass” of electrons depends on the curvature of the E-k plot. Explain this statement.

CL32_Q3. “The mass of an electron in the periodic potential of a solid is different from the free electron mass” Is the statement true or false? Can the effective mass be positive and negative? If yes, what are the specific conditions for the same.

CL32_Q4. In which condition for an electron its effective mass is equal to its true mass.

CL32_Q5. Explain the concept of electrons and holes using the idea of effective mass.

CL32_Q6. With the help of a neat labelled diagram, explain the curvature of E-k in conduction band and valence band.