

CL31_Q1. Discuss E-k diagram and give a qualitative picture of the origin of band gaps.

CL31_Q2. Explain the E-k relationship for a free electron and relate it to the electron mass.

CL31_Q3. Distinguish between conductors, insulators and semiconductors on the basis of band theory of solids.

CL31_Q4. Draw the E-K graph for electrons in metal as per the band theory of solids and discuss the concept of the effective mass of electrons in the conduction band of the metal.

CL31_Q5. With the help of E-K plot, show that materials can be classified into conductors, insulators and semiconductors.