

**CL20\_Q1.** What is meant by degeneracy of energy states in quantum systems? Mention the degenerate states for 1D, 2D and 3D infinite potential well.

**CL20\_Q2.** Give an example of a degenerate state in the case of a particle in a three dimensional box with infinite potential at the boundaries.

**CL20\_Q3.** Write the Eigen function and Eigen values for particle in a 2D infinite potential well.

**CL20\_Q4.** Write the Eigen function and Eigen values for particle in a 3D infinite potential well.

**CL20\_Q5.** Calculate the Eigen value of the electron in the lowest energy level, confined in a 2D potential box of 0.1 nm side.

**CL20\_Q6.** Give examples of degenerate states in the case of a particle in a three dimension box with infinite potential at the boundaries.