

Q1. Which of the following conclusions could not be derived from Rutherford's α -particle scattering experiment?

(a) Most of the space in the atom is empty.

(b) The radius of the atom is about 10^{-10} m while that of nucleus is 10^{-15}

(c) Electrons move in a circular path of fixed energy called orbits.

(d) Electrons and the nucleus are held together by electrostatic forces of attraction.

Sol: (c) The concept of circular paths of fixed energy was proposed by Bohr and not derived from Rutherford's scattering experiment.