

Q10. Which of the following is responsible to rule out the existence of definite paths or trajectories of electrons?

- (a) Pauli's exclusion principle**
- (b) Heisenberg's uncertainty principle**
- (c) Hund's rule of maximum multiplicity**
- (d) Aufbau principle**

Sol: (b) According to Heisenberg's uncertainty principle, the position and velocity of an electron cannot be determined simultaneously with accuracy which rules out the existence of fixed paths.