

**9** In the derivation of the relationship between the pressure, the number density of molecules and the mean square speed of the molecules of an ideal gas, which of the following is **NOT** an essential assumption?

- A** There are no intermolecular forces of attractions.
- B** The volume of the molecules are small when compared to the volume of the container.
- C** The molecules are in continuous random motion and all collisions are elastic.
- D** The average kinetic energy of a molecule is directly proportional to the temperature of the gas.