J.E.E./A.I.P.M.T. Foundation - XI Physics Worksheet
Time: 30 min   Chapter#13: Kinetic Theory-01   Full Marks: 20

Instructions:
1. All questions are compulsory.
2. Please give the explanation for the answer where applicable.

Q1 - Do the molecules of an ideal gas attract or repel each other?

(1 Mark)

Q2 - According to kinetic theory of gases, what is the relation between energy per mole and temperature of the gas?

(1 Mark)

Q3 - What happens to the random motion when an ideal gas undergoes free expansion?

(1 Mark)

Q4 - Explain the rise of temperature on heating, on the basis of kinetic theory.

(2 Marks)

Q5 - A gas in a vessel is at the pressure P0. If the masses of all the molecules be made half and their speeds be made double, then find the resultant pressure.

(2 Marks)

Q6 - What is equipartition of energy?

(2 Marks)

Q7 -What is mean free path?

(3 Marks)

Q8 - Air is filled in a vessel at 60^0C. To what temperature should it be heated in order that 1/3rd of air may escape out of the vessel?

(3 Marks)

Q9 -A diatomic gas $(\gamma = 1.4)$ does 200j of work when it is expanded isobarically. Find the heat given to the gas in the process?

(5 Marks)