Previous year JEE questions 15

The rate of diffusion of methane at a given temperature is twice that of a gas X. The molecular weight of X is

(1990 - 1 Mark)

(a) 64.0   (b) 32.0

(c) 4.0   (d) 8.0

(a) $\dfrac{r_{CH_4}}{r_x} = 2 = \sqrt{\dfrac{M_x}{M_{CH_4}}} = \sqrt{\dfrac{M_x}{16}}$,   or $M_x = 64$