

[JEE (Main)-2016]

A solid XY kept in an evacuated sealed container undergoes decomposition to form a mixture of gases X and Y at temperature T. The equilibrium pressure is 10 bar in this vessel. K_p for this reaction is

(1) 5

(2) 10

(3) 25

(4) 100



$$\text{Total Pressure} = P_0 + P_0 = 10 \Rightarrow P_0 = 5$$

$$K_p = P_x \cdot P_y = P_0^2 = \underline{\underline{25}}$$