

**Question 4**

**If 1 gram of each of the following gases are taken at STP, which of the gases will occupy (a) greatest volume and (b) smallest volume? CO, H<sub>2</sub>O, CH<sub>4</sub>, NO**

**Solution:**

(a) CH<sub>4</sub> has the least molar mass (16gm), so it would occupy the highest volume for 1gm of the gas. (b) Similarly, the higher the molar mass, the lesser is the volume occupied. NO has the highest molar mass (30gm), so it would occupy the least volume for 1gm of the gas.