CHEMISTRY

THIRUVANANTHAPURAM EDUCATIONAL DISTRICT WORKSHEET - 2



Standard – X Answerkey



- 1. (a) Size of the balloon increases.
 - (b) Volume of the gas decreases with increase in pressure.
 - (c) Boyles law states that at a constant temperature, volume of a definite mass of gas is inversely proportional to its pressure. If P is the pressure and V the volume, then P x V is a constant.
 - (d) The size of the air bubbles rising from the bottom of an aquarium increases. (Any other relevant instance)
- **2.** (a) In summer the temperature is very high. According to Charles law, volume of the gas increases with increase in temperature. So during summer fully inflated tyres will burst.
 - (b) Charles law states that at constant pressure, the volume of a definite mass of a gas is directly proportional to the temperature in Kelvin Scale. If V is volume and T the temperature,

Then, V / T will be a constant.

- (c) (i) 2
 - (ii) 400
 - (iii) 900
- **3.** (a) Volume of the balloon increases with the increase in the number of molecules present in them.
 - (b) Avagadro's Law. It states that, at constant temperature and pressure, the volume of a gas is directly proportional to the number of molecules.
 - (c) A = 2 litres and C = 10 litres
- 4. (a) Freedom of gas molecules is very high.
 - (c) The energy of gas molecules is very high.
 - (d) The attractive force between gas molecules is very less.
- 5. (a) Avagadro's law
 - (b) Charles' law
 - (c) Boyle's law
 - (d) Charles' law
- 6. A 5
 - B 23 g
 - **C** 12 g

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7. B < D < A < C

- 8. 1. TEMPERATURE
 - 2. JACQUES CHARLES
 - 3. VOLUME.
 - 4. AMEDEO AVAGADRO
 - 5. PRESSURE.
 - 6. ROBERT BOYLE