## CHEMISTRY

## THIRUVANANTHAPURAM EDUCATIONAL DISTRICT

 WORKSHEET - 2AK2CH10 2(E)
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 $\mathrm{P} \times \mathrm{V}$ 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) $\mathrm{A}=2$ litres and $\mathrm{C}=10$ 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
7. $\mathrm{B}<\mathrm{D}<\mathrm{A}<\mathrm{C}$
8. 1. TEMPERATURE
2. JACQUES CHARLES
3. VOLUME.
4. AMEDEO AVAGADRO
5. PRESSURE.
6. ROBERT BOYLE

