**CLASS : XI SUBJECT : CHEMISTRY**

 **CHAPTER: States of Matter: Gases and liquids**

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| **Sr. No.** | **Knowledge Based** | **Marks** |
| 1 | What property of molecules f real gases is identified by the Van der Waals constant ‘a’? |  |
| 2 | Which two postulates of the kinetic molecular theory are only approximations when applied to real gases? |  |
| 3 | What is triple point of a substance? |  |
| 4 | What is Byole’s Temperature? |  |
| **S. No.** | **Understanding Based** |  |
| 5 | Why urea has a sharp melting point but glass does not? |  |
| 6 | At a particular T, why vapour pressure of acetone is less than that of ether? |  |
| 7 | Why falling liquid drops are spherical? |  |
| 8 | Evaporation leads to cooling of a liquid. Give reasons. |  |
| 9 | Out of NH3 and N2 , which will have i)larger value of a and ii)larger value of b? |  |
| 10 | Water is not used in place of mercury in barometers. Comment. |  |
| 11 | Why is it difficult to cook vegetables at hill stations? |  |
| **S. No.** | **Application** |  |
| 12 | The van der Waals constants for two gases A and B are as follows:

|  |  |  |
| --- | --- | --- |
| Gases  | a(atm L2 mol-2) | b(L mol-1) |
| A | 1.63 | 0.0326 |
| B | 3.72 | 0.0521 |

 Which of these 1. Is more easily liquefied?
2. Has larger molecular size?
 |  |
| 13 | What would have happened of the gas pressure if the molecular collisions were not elastic? |  |
| 14 | Why is it not possible to cool a gas at 0K? |  |
| 15 | Is Dalton’s Law of partial pressure valid for a mixture of SO2 and O2? |  |
| **S.No.** | **HOTS** |  |
| 16 | If the molecular speeds of gaseous molecules are analogous to those of rifle bullets, why is the odour of the gaseous molecules not Detected so fast? |  |
| 17 | Wet cold weather is much more penetrating than dry cold weather. Explain. |  |