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# **CHEMISTRY**

## **MULTIPLE CHOICE - 2**

**CHEMICAL BONDING** 

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### <u>Chemical Bonding - 2</u>

#### 1) Helping concepts

As number of carbon atoms of the homologues increase, the van der Waals' forces increases so that the homologues vaporize less readily. Hence, vapour pressure decrease.

#### 2) Helping concepts

CCl4 exists as discrete molecules and its molecules are non – polar. The forces operating between its molecules are id – id interactions.

#### 3) Helping concept

Although there is a permanent dipole in each C – Cl bonds, the effect of each cancels one another vectorically due to the symmetrical distribution of the 4 Cl atoms.

$$CI$$
  $C = C$   $CI$ 

#### 4) Helping concept

By definition, lattice energy is the energy released when 1 mole of an ionic compound is formed from its constituent gaseous ions (infinitely apart) combine together.

#### 5) Helping Concepts

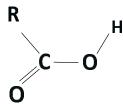
$$L.E.\propto -\left|\frac{q_+q_-}{r_++r_-}\right|$$

CsCl has the largest r+ and r- among the ionic compounds. Hence, it has the least exothermic L.E.

#### 6) Helping Concept

All the 5 compounds are isomers of hexane but (D) is unbranched. It has the greatest surface area of contact for VDW interaction and hence, the highest boiling point.

#### 7) Helping Concept



There are only 3 regions of electron clouds around c. To minimize electronic repulsion, they are directed in a trigonal planar manner and the bond angles are about 120°.

#### 8) Helping Concept

In diamond and graphite, covalent bonds operate between carbon atoms and the extension of these bonds throughout lattices gives rise to macromolecular structure.

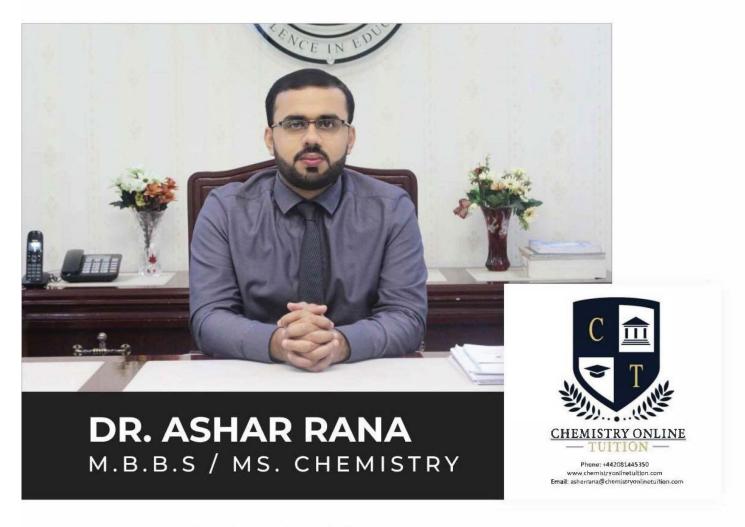
#### 9) Helping Concept

$$[NC \rightarrow Ag \leftarrow CN]^-$$

The 2 CN- ligands arrange themselves as far away from each other as possible to minimize electronic repulsion. Hence it is linear (bond angle =  $180^{\circ}$ )

#### 10) Helping Concept

Dry HCl does not dissociate in non – polar solvents such as methylbenzene, Since there is no free ions or electrons, it does not conduct electricity.



- · Founder & CEO of Chemistry Online Tuition Ltd.
- · Completed Medicine (M.B.B.S) in 2007
- Tutoring students in UK and worldwide since 2008
- · CIE & EDEXCEL Examiner since 2015
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