Date Planned : __ / __ / __	Daily Tutorial Sheet - 1	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level - 1	Exact Duration :_____

1. The octet rule is not obeyed in :

(A) CO_2 **(B)** Zn^{2+} **(C)** $SiCl_4$ **(D)** CO

2. Which of the following compounds is expected to be the most ionic?

(A) $PbCl_2$ **(B)** $PbCl_4$ **(C)** CCl_4 **(D)** $SiCl_4$

3. Which of the following pairs can form a compound with the maximum ionic character ?

(A) Na and Cl **(B)** Cs and F **(C)** Cs and I **(D)** Na and F

4. Which of the following molecules is formed without following the octet rule ?

(A) $BeCl_2$ **(B)** IF_7 **(C)** SF_6 **(D)** All of these

5. During the formation of an ionic bond, the cation may achieve :

(A) ns^2 or ns^2np^6 configuration **(B)** pseudo noble – gas – configuration

(C) inert-pair configuration **(D)** All of these configurations

6. A pure covalent bond is formed between :

(A) An electronegative element and an electropositive element

(B) An electronegative element and an electronegative element

(C) An electropositive element and an electropositive element

(D) None of these

7. In H_3O^+ the formal charge on the oxygen atom is :

(A) +1 **(B)** –1 **(C)** zero **(D)** +2

8. Which combination will give the strongest ionic bond?

(A) K^+ and Cl^- **(B)** K^+ and O^{2-} **(C)** Ca^{2+} and Cl^- **(D)** Ca^{2+} and O^{2-}

9. $Mg^{2+}O^{2-}$ is formed since : [IE = Ionization energy, EA = Electron affinity]

(A) IE of Mg is low **(B)** EA of O is low

(C) IE of Mg is high **(D)** IE of O is low

10. Select the correct statement.

(A) Both lattice energy and hydration energy decrease with ionic size

(B) Lattice energy can be calculated using Born-Haber cycle

(C) If the cation is large compared to the anion, the lattice energy will remain almost constant within a particular group

(D) All of the above are correct statements

11. Which of the following compounds has both ionic and covalent bonding?

(A) NaBr **(B)** $Ba(CN)_2$ **(C)** PCl_5 **(D)** CH_3CH_2OH

12. The formal charge on the O atoms in the ion $\left[:\ddot{O} = N = \ddot{O}:\right]^+$ is:

(A) –2 **(B)** –1 **(C)** 0 **(D)** + 1

***13.** $MgSO_4$ is soluble while $BaSO_4$ is insoluble in H_2O. This is because :

(A) Lattice energy of $BaSO_4$ is greater than $MgSO_4$

(B) $BaSO_4$ is more covalent than $MgSO_4$

(C) Hydration energy of Mg^{2+} is greater than Ba^{2+}

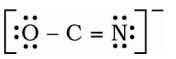
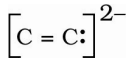
(D) Lattice energy of $MgSO_4$ is greater than $BaSO_4$

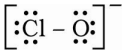
14. In terms of polar character, which one of the following order is correct?

(A) $NH_3 < H_2O < HF < H_2S$ **(B)** $H_2S < NH_3 < H_2O < HF$

(C) $H_2O < NH_3 < H_2S < HF$ **(D)** $HF < H_2O < NH_3 < H_2S$

15. Correct Lewis structure is:

(A)  **(B)** 

(C)  **(D)**