



Arjuna 2.0 JEE 2026

T.F.T. - 01

Chemical Bonding

By ATS Sir

- The atomic number of two elements A and B are 17 and 20 respectively. The formula of ionic compound made by A and B is (where the cation is conventionally written first)
 - AB
 - A_2B
 - AB_2
 - BA_2
- Variable covalency is exhibited by which pair of atoms, when formal charge on atom is zero.
 - P and S
 - N and O
 - N and P
 - F and Cl
- The number of excited state of centre atom to the formation of, IF_7 , PCl_5 , SO_2Cl_2 and NH_3 are x, y, z and w respectively, the correct order of :
 - $x > z > y > w$
 - $x = z = y = w$
 - $x > z = y < w$
 - $x < z < y < w$
- The successive ionization enthalpies of an element (M) are 899, 1757 and 14850 kJ mol^{-1} . Formula of its chloride is:
 - MCl
 - MCl_2
 - MCl_3
 - MCl_4
- Find out the molecule/ species which is not electron deficient.
 - $AlCl_3$
 - BeH_2
 - BH_4^-
 - BF_3
- Which of the following doesn't obeys Lewis octet rule?
 - CO
 - NO_3^-
 - O_3
 - NO
- Which pair of elements can form multiple bond with itself and oxygen?
 - F, N
 - N, Cl
 - N, P
 - N, C
- Which of the following is a covalent compound?
 - Al_2O_3
 - AlF_3
 - $AlCl_3$
 - $Al_2(SO_4)_3$
- Which of the following is an example of super octet molecule?
 - ClF_3
 - PCl_5
 - IF_7
 - All the three
- The compound that has the highest ionic character associated with the X – Cl bond is:
 - PCl_5
 - BCl_3
 - CCl_4
 - $SiCl_4$
- Which of the following species is neither hypervalent nor hypovalent ?
 - ClO_4^-
 - BF_3
 - SO_4^{2-}
 - CO_3^{2-}
- In which of the following species central atom is NOT surrounded by exactly 8 valence electrons?
 - BF_4^-
 - NCl_3
 - PCl_4^+
 - SF_4
- Which atom can have more than eight valence electrons when it is forming covalent bonds?
 - H
 - N
 - F
 - Cl
- Which set contains only covalently bonded molecules?
 - BCl_3 , $SiCl_4$, PCl_3
 - NH_4Br , N_2H_4 , HBr
 - I_2 , H_2S , NaI
 - Al, O_3 , As_4
- Solid NaCl is a bad conductor of electricity because:
 - in solid NaCl there are no ions
 - solid NaCl is covalent
 - in solid NaCl there is no mobility of ions
 - in solid NaCl there are no electrons

Answer Key

1. (D)
2. (A)
3. (A)
4. (B)
5. (C)
6. (D)
7. (D)
8. (C)
9. (D)
10. (D)
11. (D)
12. (D)
13. (D)
14. (A)
15. (C)

Catch Me On Telegram Group



https://t.me/Chemistry_by_AmitabhSir



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