DPP

DAILY PRACTICE PROBLEMS

Class : XIth **Subject : CHEMISTRY**
Date : **DPP No. : 6**

Topic :- Classification of Elements & Periodicity in Properties

1. Bond order of 1.5 is shown by:
   a) O_2^{2-} b) O_2 c) O_2^{+} d) O_2^{-}

2. Which one of the following is an amphoteric oxide?
   a) ZnO b) Na_2O c) SO_2 d) B_2O_3

3. Among, Al_2O_3,SiO_2,$P_2O_3$and SO_2 the correct order of acid strength is
   a) $SO_2 < P_2O_3 < SiO_2 < Al_2O_3$ b) $SiO_2 < SO_2 < Al_2O_3 < P_2O_3$
   c) $Al_2O_3 < SiO_2 < SO_2 < P_2O_3$ d) $Al_2O_3 < SiO_2 < P_2O_3 < SO_2$

4. Point out the wrong statement. On moving horizontally from left to right across a period in the Periodic Table
   a) Metallic character decreases
   b) Electronegativity increases
   c) Gram atomic volume first decreases and then increases
   d) Size of the atoms increases for normal elements

5. The correct increasing bond angles order is:
   a) $BF_3 < NF_3 < PF_3 < ClF_3$
   b) $ClF_3 < PF_3 < NF_3 < BF_3$
   c) $BF_3 \approx NF_3 < PF_3 < ClF_3$
   d) $BF_3 < NF_3 < PF_3 > ClF_3$

6. The incorrect statement among the following is
   a) The first ionisation potential of Al is less than the first ionisation potential of Mg
   b) The second ionisation potential of Mg is greater than the second ionisation potential of Na
   c) The first ionisation potential of Na is less than the first ionisation potential of Mg
   d) The third ionisation potential of Mg is greater than that of Al

7. Concept of bond order in the molecular orbital theory depends on the number of electrons in the bonding and antibonding orbitals. The bond order:
   a) Can have a −ve value
   b) Has always an integral value
   c) Is a non-zero quantity
   d) Can assume any +ve value, including zero

8. Which hybridization results non-polar orbitals?
   a) sp b) sp^2 c) sp^3 d) dsp^2

9. The total number of valency electrons for PO_4^{3-} ion is:
   a) 32 b) 16 c) 28 d) 30

10. Intramolecular hydrogen bonding is found in:
    a) Salicyldehyde b) Water c) Acetaldehyde d) Phenol

11. Amphoteric oxide combinations are in
    a) ZnO, K_2O,SO_3 b) ZnO,P_2O_5,Cl_2O_7 c) SnO_2,Al_2O_3,ZnO d) PbO_2,SnO_2,SO_3

12. Chlorine atom tends to acquire the structure of:
    a) He b) Ne c) Ar d) Kr

13. Which of the following ion is the smallest ion?
    a) O_2 b) O_2^+ c) O_2^- d) O_2^{2-}

14. Variable valency is characteristic of:
    a) Noble gas
    b) Alkali metals
    c) Transition metals
    d) Non-metallic elements

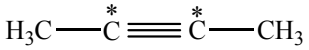
15. Which force is strongest?
    a) Dipole-dipole forces
    b) Ion-ion forces
    c) Ion-dipole forces
    d) Ion-induced dipole forces

16. Identify the transition element.
    a) $1s^2$, $2s^2 2p^6$, $3s^2 3p^6$,$4s^2$ b) $1s^2$,$2s^2 2p^6$,$3s^2 3p^6 3d^2$,$4s^2$
    c) $1s^2$, $2s^2 2p^6$, $3s^2 3p^6 3d^{10}$,$4s^2 4p^2$ d) $1s^2$,$2s^2 2p^6$,$3s^2 3p^6 3d^{10}$,$4s^2 4p^1$

17. For a covalent solid, the units which occupy lattice points are:
    a) Atoms b) Ions c) Molecules d) Electrons

18. Which is not true in case of ionic bond?
    a) It is linear bond
    b) It is 100% ionic
    c) It is formed between two atoms with large electronegativity difference
    d) None of the above

19. In the following molecule, the two carbon atoms marked by asterisk ($*$) possess the following type of hybridized orbitals:



    a) sp^3-orbital b) sp^2-orbital c) sp-orbital d) s-orbital

20. The element which exists in both hard and soft form is:
    a) Fe b) Si c) C d) Al