DPP
DAILY PRACTICE PROBLEMS

Class : XIth **Subject : CHEMISTRY**
Date : **DPP No. : 10**

Topic :- Classification of Elements & Periodicity in Properties

1. Born Haber cycle is used to determine:
   a) Lattice energy b) Electron affinity c) Ionization energy d) Either of them

2. The electronic configurations of four elements L,P,Q and R are given below,
   $L = 1s^2,2s^2 2p^4$ $Q = 1s^2,2s^2 2p^6,3s^2 3p^5$
   $P = 1s^2,2s^2 2p^6,3s^1$ $R = 1s^2,2s^2 2p^6,3s^2$
   The formula of the ionic compounds that can be formed between these elements are:
   a) L_2P, RL, PQ, R_2Q b) LP, RL, PQ, RQ c) P_2L, RL, PQ, RQ_2 d) LP, R_2L, P_2Q, RQ

3. The element with strong electropositive nature is:
   a) Cu b) Cs c) Cr d) Ba

4. Octet rule is not valid for the molecule:
   a) CO_2 b) H_2O c) O_2 d) CO

5. The correct order of reactivity of halogens is
   a) F > Br > Cl > I b) F > Cl > Br > I c) I > Br > Cl > F d) Cl > I > Br > F

6. NH_3 has higher boiling point than expected, because :
   a) With water it forms NH_4OH
   b) It has strong intermolecular hydrogen bonds
   c) It has strong intermolecular covalent bonds
   d) Its density decreases in freezing

7. The screening effect of d-electrons is:
   a) Equal to the p-electrons
   b) Much more than p-elecrons
   c) Same as f-electrons
   d) Less than p-electrons

8. Which has the largest first ionisation energy?
   a) Li b) Na c) K d) Rb

9. In which of the following molecules are all the bonds not equal?
   a) AlF_3 b) NF_3 c) ClF_3 d) BF_3

10. The bond between two identical non-metal atoms has a pair of electrons:
   a) Unequally shared between the two
   b) Equally shared between the two
   c) Transferred fully from one atom to another
   d) None of the above

11. The number of unpaired electrons in a paramagnetic diatomic molecule of an element with atomic number 16 is:
   a) 4 b) 1 c) 2 d) 3

12. In NO_3^- ion, number of bond pair and lone pair electrons are respectively:
   a) 2, 2 b) 3, 1 c) 1, 3 d) 4, 8

13. Which element of second period forms most acidic oxide?
   a) Carbon b) Nitrogen c) Boron d) Fluorine

14. The electronic configuration of four elements are given below. Which element does not belong to the same family?
   a) $[Xe]4f^{14}5d^{10}6s^2$ b) $[Kr]\ 4d^{10}5s^2$ c) $[Ne]3s^23p^5$ d) $[Ar]\ 3d^{10}4s^2$

15. For the four successive transition elements (Cr, Mn, Fe and Co), the stability of $+2$ oxidation state will be there in which of the following order?
   (At. no. Cr = 24, Mn = 25, Fe = 26, Co = 27)
   a) $Cr > Mn > Co > Fe$ b) $Mn > Fe > Cr > Co$ c) $Fe > Mn > Co > Cr$ d) $Co > Mn > Fe > Cr$

16. Which is correct in the following?
   a) Radius of Cl atom is 0.99 Å, while that of Cl^+ ion is 1.54 Å
   b) Radius of Cl atom is 0.99 Å, while that of Na atom is 1.54 Å
   c) The radius of Cl atom is 0.95 Å, while that of Cl^- ion is 0.81 Å
   d) Radius of Na atom is 0.95 Å, while that of Na^+ ion is 1.54 Å

17. The linear structure is possessed by:
   a) $SnCl_2$ b) NCO^- c) NO_2^+ d) CS_2

18. Which of the following has largest ionic radius?
   a) Na^+ b) K^+ c) Li^+ d) Cs^+

19. In the cyanide ion, the formal negative charge is on:
    a) C
    b) N
    c) Both C and N
    d) Resonate between C and N

20. The size of ionic species is correctly given in the order:
    a) $Cl^{7+} > Si^{4+} > Mg^{2+} > Na^{+}$
    b) $Na^{+} > Mg^{2+} > Si^{4+} > Cl^{7+}$
    c) $Na^{+} > Mg^{2+} > Cl^{7+} > Si^{4+}$
    d) $Cl^{7+} > Na^{+} > Mg^{2+} > Si^{4+}$