DPP
DAILY PRACTICE PROBLEMS

Class : XIth **Subject : CHEMISTRY**
Date : **DPP No. : 2**

Topic :- Classification of Elements & Periodicity in Properties

1. A π-bond is formed by sideways overlapping of:
   a) s-s orbitals b) p-p orbitals c) s-p orbitals d) s-p-s orbitas

2. Which oxide of nitrogen is isoelectronic with CO_2?
   a) NO_2 b) N_2O c) NO d) N_2O_2

3. In which of the following pairs of molecules/ions, the central atom has sp^2-hybridization?
   a) NO_2 and NH_3 b) BF_3 and NO_2^- c) NH_2^- and H_2O d) BF_3 and NH_2^-

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

5. Boron cannot form which one of the following anions?
   a) BF_6^{3-} b) BH_4^- c) $B(OH)_4^-$ d) BO_2^-

6. Most covalent halide of aluminium is:
   a) $AlCl_3$ b) AlI_3 c) $AlBr_3$ d) AlF_3

7. The shape of ClO_3^- according to VSEPR model is:
   a) Planar triangle b) Pyramidal c) Tetrahedral d) Square planar

8. The correct order of increasing bond angles in the following triatomic species is:
   a) $NO_2^- < NO_2 < NO_2^+$ b) $NO_2^+ < NO_2 < NO_2^-$ c) $NO_2^+ < NO_2^- < NO_2$ d) $NO_2^- < NO_2^+ < NO_2$

9. Which of the following pairs has both members from the same group of the Periodic Table?
   a) Mg – Ba b) Mg – Cu c) Mg – K d) Mg – Na

10. Silicon has 4 electrons in the outermost orbit. In forming the bond:
    a) It gains electrons b) It losses electrons c) It shares electrons d) None of these

11. sp^2-hybridization is shown by:
    a) $BeCl_2$ b) BF_3 c) NH_3 d) XeF_2

12. A p-block element in which last electron enters into s-orbitals of valence shell instead of p-orbital is:
    a) As b) Ga c) No such element exist d) He

13. Which of the following are not correct?
    a) Lone pair of electrons present on central atom can give rise to dipole moment
    b) Dipole moment is vector quantity
    c) CO_2 molecule has dipole moment
    d) Difference in electronegativities of combining atoms can lead to dipole moment

14. The order of first ionisation energies of the element Li, Be, B, Na is
a) Li $>$ Be $>$ B $>$ Na b) Be $>$ B $>$ Li $>$ Na c) Na $>$ Li $>$ B $>$ Be d) Be $>$ Li $>$ B $>$ Na

15. Differentiating electron in inner transition elements enters the..... orbital.
a) s b) p c) d d) f

16. Which is expected to conduct electricity?
a) Diamond b) Molten sulphur c) Molten KCl d) Crystalline NaCl

17. Elements whose electronegativities are 1.2 and 3.0, form:
a) Ionic bond b) Covalent bond c) Coordinate bond d) Metallic bond

18. Which is the correct order of ionic sizes?) At. no. : Ce $=$ 58, Sn $=$ 50, Yb $=$ 70 and Lu $=$ 71)
a) Ce $>$ Sn $>$ Yb $>$ Lu b) Sn $>$ Yb $>$ Ce $>$ Lu c) Sn $>$ Ce $>$ Yb $>$ Lu d) Lu $>$ Yb $>$ Sn $>$ Ce

19. Oxygen is divalent, but sulphur exhibits variable valency of 2, 4 and 6, because:
a) Sulphur is less electronegative than oxygen
b) Sulphur is bigger atom than oxygen
c) Ionisation potential of sulphur is more than oxygen
d) Of the presence of d-orbitals in sulphur

20. In the Periodic Table, going down in the fluorine group
a) Stability of hydrides will increases b) Ionic radii will increases
c) Electronegativity will increases d) IE will increases