

Class : XIth
Date :

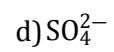
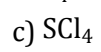
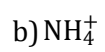
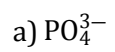
Subject : CHEMISTRY
DPP No. : 4

Topic :- Classification of Elements & Periodicity in Properties

- Which of the following oxides is not expected to react with sodium hydroxide?
a) BeO b) B₂O₃ c) CaO d) SiO₂
- In which molecule, the central atom does not use sp³-hybrid orbitals in its bonding?
a) NH₂⁻ b) BeF₃⁻ c) SO₂Cl₂ d) SO₄²⁻
- Which element has the lowest electronegativity?
a) Li b) F c) Cl d) Fe
- Amongst the following elements the configuration having the highest ionization energy is:
a) [Ne]3s²3 p¹ b) [Ne]3s²3 p³ c) [Ne]3s²3 p² d) [Ar]3d¹⁰4s²4 p³
- Which species does not exist?
a) (SnCl₆)²⁻ b) (GeCl₆)²⁻ c) (CCl₆)²⁻ d) (SiCl₆)²⁻
- Which one of the following has not triangular pyramidal shape?
a) NH₃ b) NCl₃ c) PF₃ d) BCl₃
- Among NH₃, BeCl₂, CO₂ and H₂O, the non-linear molecules are:
a) BeCl₂ and H₂O b) BeCl₂ and CO₂ c) NH₃ and H₂O d) NH₃ and CO₂
- When the hybridization state of carbon atom changes from sp³ to sp² and finally to sp, the angle between the hybridized orbitals:
a) Decreases gradually
b) Decreases considerably
c) Is not affected
d) Increases progressively
- Which is distilled first?
a) Liquid H₂ b) Liquid CO₂ c) Liquid O₂ d) Liquid N₂

10. The equilateral triangle shape has:
a) sp -hybridization b) sp^2 -hybridization c) sp^3 -hybridization d) sp^3d -hybridization
11. Which atomic orbital is always involved in sigma bonding only?
a) s b) p c) d d) f
12. Two ice cubes are pressed over each other and unite to form one cube. Which force is responsible for holding them together?
a) van der Waals' forces
b) Covalent attraction
c) Hydrogen bond formation
d) Dipole-dipole attraction
13. The decreasing values of bond angles from $\text{NH}_3(106^\circ)$ to $\text{SbH}_3(101^\circ)$ down group-15 of the periodic table is due to:
a) Increasing $bp - bp$ repulsion
b) Increasing p -orbital character in sp^3
c) Decreasing $lp - bp$ repulsion
d) Decreasing electronegativity
14. The bond that determines the secondary structure of a protein is:
a) Coordinate bond b) Covalent bond c) Hydrogen bond d) Ionic bond
15. Which is not an exception to octet rule?
a) BF_3 b) SnCl_4 c) BeI_2 d) ClO_2
16. Higher is the bond order, greater is:
a) Bond dissociation energy
b) Covalent character
c) Bond length
d) Paramagnetism
17. Highest electron affinity among the following is
a) Fluorine b) Chlorine c) Sulphur d) Xenon
18. According to molecular orbital theory for O_2^+ :
a) Bond order is less than O_2 and O_2^+ is paramagnetic
b) Bond order is more than O_2 and O_2^+ is paramagnetic
c) Bond order is less than O_2 and O_2^+ is diamagnetic
d) Bond order is more than O_2 and O_2^+ is diamagnetic
19. Which of the following has fractional bond order?
a) O_2^+ b) O_2^- c) F_2^- d) H_2^-

20. Which of the following is not isostructural with SiCl_4 ?



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