

Class : XIth
Date :

Subject : CHEMISTRY
DPP No. : 8

Topic :- Classification of Elements & Periodicity in Properties

- The incorrect statement among the following is:
 - The first ionization potential of Al is less than the first ionization potential of Mg
 - The second ionization potential of Mg is greater than the second ionization potential of Na
 - The first ionization potential of Na is less than the first ionization potential of Mg
 - The third ionization potential of Mg is greater than the third ionization potential of Al
- Which one of the following is an amphoteric oxide?
 - ZnO
 - Na₂O
 - SO₂
 - B₂O₃
- The shape of ClO₄⁻ ion is:
 - Square planar
 - Square pyramidal
 - Tetrahedral
 - Trigonal bipyramidal
- Which one is correct?
 - Dinitrogen is paramagnetic
 - Dihydrogen is paramagnetic
 - Dioxygen is paramagnetic
 - Dioxygen is diamagnetic
- In which one of the following pairs the radius of the second species is greater than that of the first?
 - Na, Mg
 - O²⁻, N³⁻
 - Li⁺, Be²⁺
 - Ba²⁺, Sr²⁺
- Atomic radii of fluorine and neon in angstrom unit are respectively given by:
 - 0.72, 1.60
 - 1.60, 1.60
 - 0.72, 0.72
 - 1.60, 0.72
- According to IUPAC nomenclature, a newly discovered element has been named as Uun. The atomic number of the element is
 - 111
 - 112
 - 109
 - 110
- The correct order of increasing electron affinity of halogens is
 - F < Cl < Br < I
 - I < Br < F < Cl
 - I > Br > Cl > F
 - Br > I > F > Cl

9. An element X has 3 electrons in p -orbitals and also belongs to III period. Its molecular formula should be:
- a) X b) X_2 c) X_4 d) X_5
10. Which of the following sequence regarding ionisation potential of coinage metal is correct:
- a) $Cu > Ag > Au$ b) $Cu < Ag < Au$ c) $Cu > Ag < Au$ d) $Ag > Cu < Au$
11. The bond length is maximum in:
- a) H_2S b) HF c) H_2O d) Ice
12. Which of the following is the most electropositive element?
- a) P b) S c) Mg d) Al
13. Which group of atoms have nearly same atomic radius?
- a) Na, K, Rb, Cs b) Li, Be, B, C c) Fe, Co, Ni, Cu d) F, Cl, Br, I
14. Which of the following statements is wrong?
- a) Metals are more than non-metals.
 b) There are only few metalloids.
 c) Hydrogen can be placed with alkali metals as well as with halogen in Periodic Table.
 d) Non-metals are more than metals.
15. Which one of the following has the lowest ionisation energy?
- a) $1s^2 2s^2 2p^6$ b) $1s^2 2s^2 2p^6 3s^1$ c) $1s^2 2s^2 2p^5$ d) $1s^2 2s^2 2p^3$
16. The set representing the correct order of first ionisation potential is:
- a) $K > Na > Li$ b) $Be > Mg > Ca$ c) $B > C > N$ d) $Ge > Si > C$
17. Which one of the following belongs to representative group of elements in the Periodic Table?
- a) Aluminium b) Chromium c) Argon d) Lanthanum
18. The shape of NO_3^- is planar. It is formed by the overlapping of oxygen orbitals with ... orbitals of nitrogen .
- a) sp^3 -hybridized b) sp^2 -hybridized c) Three p -orbitals d) None of these
19. If a molecule MX_3 has zero dipole moment the sigma bonding orbitals used by M (at.no. < 21) is:
- a) Pure p b) sp -hybrid c) sp^2 -hybrid d) sp^3 -hybrid
20. 1, 3-butadiene has:
- a) 6σ and 2π -bonds b) 2σ and 2π -bonds c) 9σ and 2π -bonds d) 6σ and 2π -bonds