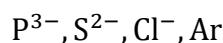




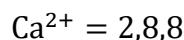
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1 Order of radius is -Vander Wall's radius \square Metallic radius \square Covalent radius

2. Same no. of electrons



3. ${}_{20}\text{Ca} = 2,8,8,2$



Hence, Ca^{2+} has 8 electrons each in outermost and penultimate shell.

4. Therefore, among the given ions Al^{3+} have the highest +3 charge.

5. (B) $\text{F}^- < \text{O}^{2-} < \text{N}^{3-}$ More negative charge.

(C) $\text{Na} > \text{Li} < \text{K}$ Along the group the size increases.

(D) $\text{Fe}^{2+} > \text{Fe}^{3+} > \text{Fe}^{4+}$ Due to more positive charge

6. (A) Be and Al are not in same group. (Correct)

They are in different groups.

(B) All the transition metal correspond to d-block.

Yes , d- block elements are called the transition elements.

(C) Be and Al are having lot of similarities in their properties.

Eg: Diagonal relationship.

(D) The atomic radius decreases with small difference.

7. The atomic mass number of an element IS 80 , and it lies in group 17 of the periodic table.

$$Z = 35, A = 45 + 35 = 80 \text{ Group } = 17$$

The monoatomic anion has 45 neutrons.

The monoatomic anion has 36 electrons total.

\therefore The number of electrons in a monoatomic atom = $36 - 1 = 35$

($Z = 35$) The atom's atomic number. The atom is thus bromine and is a member of the halogen family in group 17.

No. of protons = No. of electrons = 35

8. ($\text{Cs} > \text{Na} > \text{Mg} > \text{Si} > \text{Cl}$)



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9. Correct Answer - Atomic radius of K is larger than F because the size of cation is smaller than its parent atom while size of anion is bigger than its parent atom. Thus, atomic radii of K will be greater than 1.34\AA while atomic radii of F will be less than 1.34\AA . Atomic radius of K is larger than F because the size of cation is smaller than its parent atom while size of anion is bigger than its parent atom. Thus, atomic radii of K will be greater than 1.34\AA while atomic radii of F will be less than 1.34\AA .
10. (i) K
(ii) Br^-
(iii) O^{2-}
(iv) Na^+
(v) As
(vi) Na^+