MORE QUESTIONS SOLVED

I. Very Short Answer Type Questions

Question 1. State the Modem Periodic Law.
Answer: Modem Periodic Law states that physical and chemical properties of the elements are a periodic function of their atomic numbers.

Question 2. Why is ionization enthalpy of nitrogen greater than that of oxygen?
Answer: Nitrogen has exactly half filled p-orbitals.

Question 3. Why are electron gain enthalpies of Be and Mg positive?
Answer: They have fully filled s-orbitals and hence have no tendency to accept an additional electron. That's why energy is needed if an extra electron is to be added. Therefore, electron gain enthalpies of Be and Mg are positive.

Question 4. Give four examples of species which are isoelectronic with ca^{2+}.
Answer: Ar, K^{+}, CT, S^{2-}, or P^{3-} are isoelectronic with ca^{2+}.

Question 5. Which two elements of the following belong to the same period?
Al, Si, Ba and O
Answer: Al and Si.

Question 6. Explain why chlorine can be converted into chloride ion more easily as compared to fluoride ion from fluorine ?
Answer: Electron gain enthalpy of Cl is more negative than that of F.

Question 7. What are horizontal rows and vertical columns of the periodic table called?
Answer: Horizontal rows are called periods and vertical columns are called groups.

Question 8. Which has a larger radius?
(i) Mg or Ca (ii) S or Cl
Answer: (i) Ca (ii) S.

Question 9. What are representative elements?
Answer: The elements of group 1 (alkali metals), group 2,(alkaline earth metals) and group 13 to 17 constitute the representative elements. They are elements of s-block and p-block.

Question 10. Give general electronic configuration off-block elements?
Answer: General electronic configuration of f-block elements =(n - 2) f^{1-14} (n -1) d^{0-1} ns^{2}.

Question 11. What are inner transition metals? Why are they called rare earth metals?
Answer: Lanthanoids (the fourteen elements after Lanthanum) and actinides (the fourteen elements after actinium) are called inner

transition elements.

Question 12. Define ionisation enthalpy.
Answer: It is the energy required to remove an electron from an isolated gaseous atom in its ground state. M (g) + I.E. àM^{+} (g) + e^{-}

Question 13. The electronic configuration of an element is Is 2s 2p 3s 3p 4s . Locate the element in the periodic table.
Answer:

- As the principal quantum number for the valence shell is 4, the element is present in the 4th period.
- Since the last electron has been filled in 4s sub-shell (or orbital), the element belongs to s-block.
- As there is only one electron in the valence s-sub-shell, the element is present in group I.

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