

Board – CBSE

Class – 11th

Topic – Classification of Elements & Periodicity in Properties

1. Explain why the electron gain enthalpy of fluorine is less negative than that of chlorine.
2. Write the electronic configuration of following atoms/ions.
 $\text{Cu}, \text{Ca}^{2+}, \text{O}^{2-}, \text{F}^{-}, \text{Fe}^{3+}, \text{Mo}, \text{Cu}^{2+}, \text{Cr}$
3. Name the elements which have the highest and lowest first ionization enthalpy.
4. What is diagonal relationship? Give two examples of it
5. Arrange the following species in decreasing order of size. Give reasons also.
 $\text{O}^{2-}, \text{F}^{-}, \text{Mg}^{2+}, \text{Na}^{+}, \text{N}^{3-}$
6. Differentiate between electronegativity and electron affinity.
7. Why is atomic number a better basis for classification of the elements than atomic mass?
8. Why does first ionization enthalpy decrease while moving down a group?
9. Write the general outer electronic configuration of s-, p-, d- and f-block elements.
10. Why are the number of elements in the first period two?
11. What is the modern periodic law? How is it different from one given by Mendeleev?
12. Explain covalent radius. How do covalent radii vary in the periodic table?
13. Discuss the position of hydrogen in the periodic table.
14. The formation of $\text{F}^{-}(\text{g})$ from $\text{F}(\text{g})$ is exothermic whereas that of $\text{O}^{2-}(\text{g})$ from $\text{O}(\text{g})$ is endothermic. Explain.
15. Explain why lanthanides and actinides are placed separately at the bottom of the periodic table.
16. What is screening or shielding effect? How does it influence the ionization enthalpy?
17. Why is the second electron gain enthalpy of halogens zero?
18. Discuss the factors affecting electron gain enthalpy and the trend in its variation in the periodic table.
19. Define ionization enthalpy. Discuss the factors affecting ionization enthalpy of the elements and its trends in the periodic table.
20. In what manner is the long form of periodic table better than Mendeleev's periodic table? Explain with examples.