

CLASS – XI CHEMISTRY ASSIGNMENT NO. 5**PERIODIC CLASSIFICATION OF ELEMENTS**

- Q1. Who gave Law of Trade?
- Q2. Name the scientists who first arranged then known elements in order of increasing atomic weights.
- Q3. Name the scientist who got Davy medal in 1887 by the Royal Society London and why?
- Q4. Explain Leathar Mayer's contribution in classification of elements.
- Q5. What do you understand by periodicity for the elements?
- Q6. Why it is not possible to measure the absolute value of the atomic radius of an element?
- Q7. Based upon the nature of Bonding, what are the different forms of atomic radii?
- Q8. Define each of one of atomic radii with example and compare them?
- Q9. Explain variation of Atomic radii a long a period and down the group.
- Q10. Out of Li^+ , Be^{+2} and B^{+3} , which has the smallest ionic radius & why?
- Q11. Which of the following are iso-electronic in nature?
(i) O^{2-} (ii) Na (iii) F (iv) S^{2-} (v) Mg^{2+} (vi) $\text{Al} + 3$
- Q12. Select the species with smallest size in the following:- (a) I, I^+ , I^- (b) N, O, P (c) F, Cl, Br
- Q13. Among the elements with At No. 9, 12, 36 identify the element which is (a) highly electronegative (b) an inert gas in nature (c) highly electropositive in nature.
- Q14. Arrange the following in increasing order of the property indicate:-
(i) F, Cl, Br and I (negative electron gain enthalpy) (ii) Mg^{+2} , O^{2-} , Na^+ , F^- , and N^{3-} (ionic size).
(iii) Mg, Al, Si and Na (Ionization Enthalpy) (iv) Br^+ , Br and Br^- (size) (v) GN, O and F (Ionization Enthalpy)
- Q15. Would you expect the Ionization Enthalpies of 2 isotopes of same element to be same or different? Justify your answer?
- Q16. Write the general e-configuration of s, p, d and f-block elements?
- Q17. Argon (Atomic mass = 39.94) has been placed before Potassium (At mass 39.10) in the Periodic table. Why?
- Q18. Explain (a) why do Ionization enthalpies decrease down a gp.
(b) Why do Ionization Enthalpies increase as we move along the period?
- Q19. From each set, choose the element with largest Ionization enthalpy and explain your answer:-
(a) F, O, N (b) Mg, P, Ar (c) B, Al, Ba
- Q20. Predict the position of the element in the periodic table satisfying the configuration $(n-1)d^1ns^2$ for $n=4$.