

Sainik School Tilaiya

Class-XI

Subject-Chemistry

Chapter Name- Classification of Element and Periodicity in properties

Q1. Short answer type questions.

- a. How many elements are known at present?
- b. Who was the first scientist to classify elements according to their properties?
- c. What is the basis of triad formation of elements?
- d. State modern periodic law.
- e. What is Mendeleev's periodic law?
- f. Define electronic configuration.
- g. How does atomic size change in a group?
- h. Why Li and Mg show resemblance in chemical behaviour?
- i. Define valency.
- j. How does valency vary in a group and period in the periodic table?
- k. What is the valency of a noble gas?
- l. How do metals react in a period?
- m. What is an amphoteric oxide?
- n. Define a neutral oxide.
- o. What is the general outer electronic configuration of f-block elements?
- p. Why do Na and K have similar properties?

Q2. Long answer type questions.

- a. How did Mendeleev arrange the elements?
- b. Give the main features of s-block and d-block elements.
- c. Explain why cations are smaller and anions are larger in radii than their parent?
- d. Define ionization enthalpy and electron gain enthalpy.
- e. How does metallic character change in a group?
- f. Among the elements B, Al, C and Si
 - i. Which has highest first ionization enthalpy?
 - ii. Which has largest atomic radius?

- g.** Na^+ has higher value of ionization enthalpy than Ne, though both have same electronic configuration?
- h.** How does the reactivity of non-metals change in a period and group?
- i.** Give properties of the oxides in a particular period.
- j.** Why does Li form covalent bond unlike other alkali which forms ionic bond?
- k.** Why are the elements at the extreme left and extreme right the most reactive?
- l.** Why does the ionization enthalpy gradually decrease in a group?
- m.** Describe the main features of Mendeleev's periodic table.
- n.** How does electronegativity and non-metallic character relate to each other?
- o.** Why does electronegativity value increase across the period and decrease down the group?
