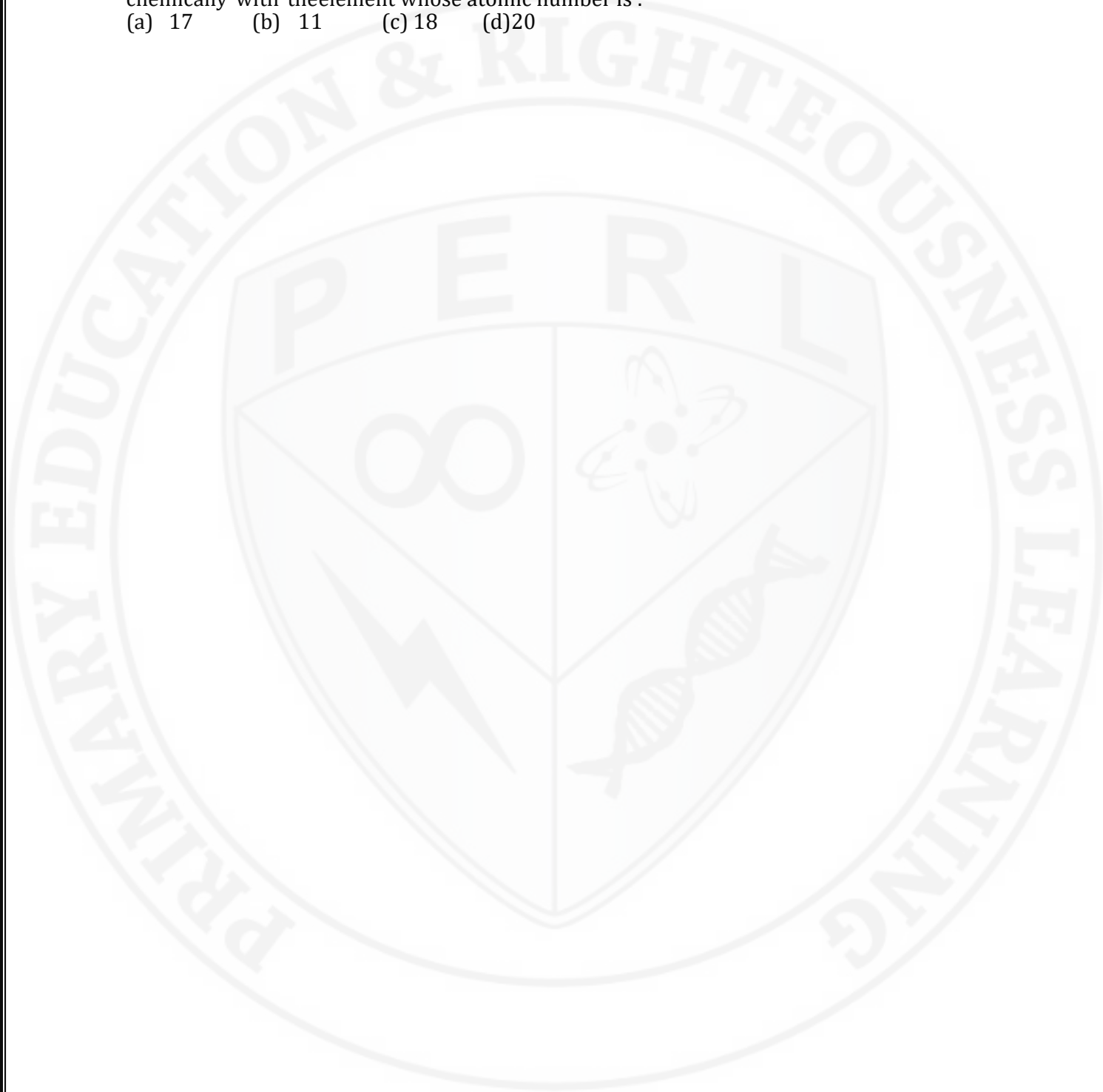


- In the periodic table, alkali metals are placed in the group :  
(a) 1 (b) 11  
(c) 17 (d) 18
- An alkaline earth metal is :  
(a) Barium (b) Calcium  
(c) Lead (d) Copper
- The number of electrons present in the valence shell of halogen is :  
(a) 1 (b) 3  
(c) 5 (d) 7
- If an element A belongs to period 3 and Group II then it will have :  
(a) 3 shells and 2 valence electrons  
(b) 2 shells and 3 valence electrons  
(c) 3 shells and 3 valence electrons  
(d) 2 shells and 2 valence electrons
- On moving from left to right across a period of the periodic table, the atomic size :  
(a) Decreases (b) increases  
(c) Remains the same (d) Sometimes increases and sometimes decreases
- On moving from left to right across a period of the periodic table, the non-metallic character of the elements :  
(a) Decreases (b) Increases  
(c) Remains the same (d) Depends on the period
- On moving from left to right across a period of the periodic table, the ionization potential :  
(a) Goes up and down (b) Decreases  
(c) Increases (d) Remains the same
- Ionisation potential increases over a period from left to right because the :  
(a) Atomic radius increases and nuclear charge increases  
(b) Atomic radius decreases and nuclear charge decreases  
(c) Atomic radius increases and nuclear charge decreases  
(d) Atomic radius decreases and nuclear charge increases
- On moving from left to right across a period of the periodic table, the electron affinity of the elements in groups 1 to 7 :  
(a) Goes up and then down (b) Decreases and then increases  
(c) Increases (d) Decreases
- An element in period 3 whose electron affinity is zero :  
(a) Neon (b) Sulphur  
(c) Sodium (d) Argon
- Among the period 2 elements, the element which has high electron affinity is :  
(a) Lithium (b) Carbon  
(c) Chlorine (d) Fluorine
- On moving from left to right across a period of the periodic table, the electronegativity :  
(a) Depends on the number of valence electrons  
(b) Remains the same  
(c) Decreases  
(d) Increases

13. Among the elements given below, the element with the least electronegativity is :  
(a) Lithium (b) Carbon  
(c) Boron (d) Fluorine
14. An element with the atomic number 19 will most likely combine chemically with the element whose atomic number is :  
(a) 17 (b) 11 (c) 18 (d) 20



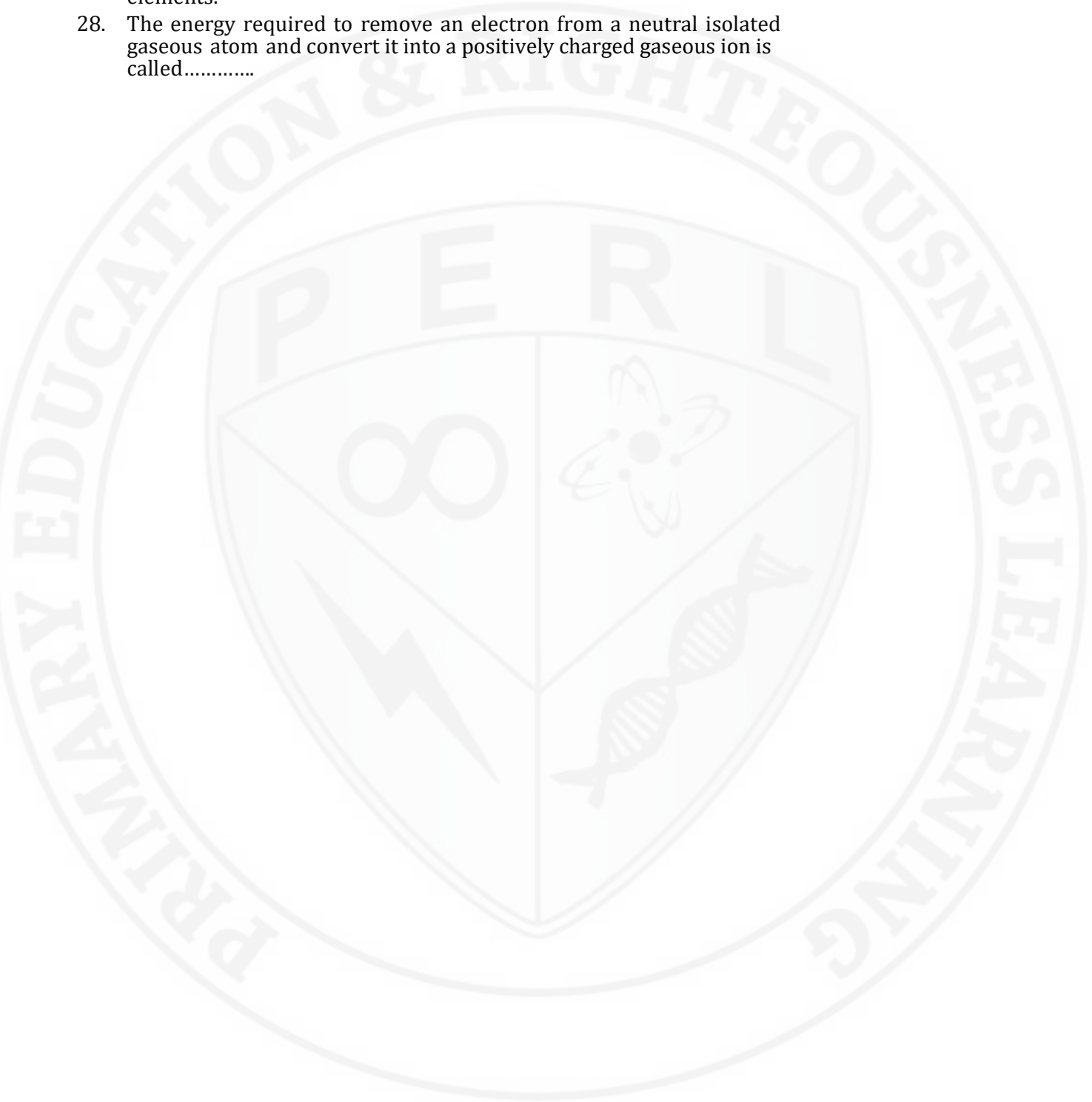
## Fill in the Blanks

### Chapter 1. Periodic Properties and Variations of Properties

Q.Fill in the blanks in the following statements, with suitable words :

- The modern Periodic Table has..... periods.
- Each.....in the Periodic Table is comprised of elements having the same number of electron shells.
- Elements in a period, all have the same number of.....in their atoms.
- Elements in a group, all have the same number of .....
- The most active metals are located in ..... 1 and 2 of the Periodic Table.
- The most reactive non-metals comprise group ..... of the Periodic Table.
- The elements of.....are known as typical elements.
- The elements occupying left and right side groups of Periodic Table are called .....
- The rare gases are placed in.....group at the end.
- The properties of elements are periodic function of their.....
- The atomic size .....as we move left to right across the period, because the ..... increases but the ..... remains the same.
- The metallic character..... in a group as one moves from top to bottom.
- The metallic character..... in a period as one moves from right to left.
- In a period or in a group, the larger the atomic size of an element, the..... metallic is the element.
- Moving across a ..... of the periodic table, the elements show increasing ..... character.
- The amount of energy involved in the reaction  $X + \text{energy} \rightarrow X^+ + e^-$  is known as the .....of the element X.
- Across a period, the ionization potential.....
- Down the group, electron affinity.....
- The higher the electron affinity of a non-metal,.....chemically reactive the non-metal is.
- The tendency to gain an electron ..... on moving down a group and . on moving across a period in the Periodic Table.
- Elements having high ionization potential have.....electron affinities.
- The electronegativity of elements ..... across a period and . down a group.
- In general, non-metals are.....electronegative than metals.
- On moving from left to right in a given period, the number of shells .....
- Element X belongs to group 2 and period 3 of the Periodic Table. It has ..... electrons in the outer most shell.

26. Each period except period 1 in the Periodic Table begins with and ends up with  
a .....
27. The metallic and non-metallic character depends upon the.....and .of the elements.
28. The energy required to remove an electron from a neutral isolated gaseous atom and convert it into a positively charged gaseous ion is called.....



**EXPLAIN IN DETAIL**

- Q. 1. Explain why the elements placed in the same group of the periodic table have the same chemical properties ?
- Q. 2. Why group IA elements are called alkali metals ?
- Q. 3. Why sodium is a metal while sulphur is a non-metal ?
- Q. 4. Alkali metals are good reducing agents.
- Q. 5. Why are the elements sodium and chlorine in the same period of the periodic table ?
- Q. 6. Sodium atom, Na forms the positive ion  $\text{Na}^+$ , but chlorine atom Cl, does not form the positive  $\text{Cl}^+$  ion.
- Q. 7. Potassium atom is larger than sodium atom. Why ?
- Q. 8. Magnesium atom is smaller than calcium atom. Why ?
- Q. 9. Magnesium atom is smaller than sodium atom. Why ?
- Q. 11.  $\text{Mg}^{2+}$  ions is smaller than  $\text{O}^{2-}$  ion although both are iso-electronic. Explain.
- Q. 12. Why ionization potential of the element increases across a period ?
- Q. 13. Noble gases have zero electron affinity values.
- Q. 14. Why elements with low ionization potential exhibit metallic properties ?