# INTERNATIONAL INDIAN SCHOOL, RIYADH

## WORKSHEET SAII -2015

## PERIODIC TABLE

SUBJECT: CHEMISTRY STD – X

1. **Choose from the following**

**Ca, Li , Na , Nc**
**20 3 II 10**

**(a) An element having two shells completely filled with electrons .**

**(b) Two elements belonging to the same group of the periodic table.**

2. **The elements of the third period of the periodic table are given below.**

| Group ➔ | I | II | III | IV | V | VI | VII |
|---|---|---|---|---|---|---|---|
| Period 3 ↓ | Na | Mg | Al | Si | P | S | Cl |

**(a) Which atom is bigger , Na or Mg. Why?**

**(b) Identify the most (1) Metallic and (ii) Non-metallic element in period 3.**

3. **Write the electronic configuration of element 'X' (At : No.:II ) and element Y (At, No. 8) . State the formula of the compound formed when element X combines with Y . Draw the electron- dot structure of the product and state the nature of the bond formed.**

4. **Two element X and Y belong to group 1 and 2 respectively in the same period of the periodic table. Compare them with respect to**

**(1) the number of valence electrons in their stoms.**

**(2) their valencies**

**(3) metallic character**

**(4) the sizes of their atoms**

**(5) the formula of their oxides**

**(6) the formula of their chlorides.**

5. **Atomic number is considered to be a more appropriate parameter than atomic mass for classification of elements in a periodic table. Why?**

**How does metallic character of elements vary on moving from**

**(i) Left to right in a period , and**

**(ii) From top to bottom in a group?**

**Give reasons for your answers.**

6. **An element is placed in $2^{nd}$ group and $3^{rd}$ period of the periodic table, burns in presence of oxygen to form a basic oxide.**

   **(a) Identify the element**

   **(b) Write electronic configuration**

   **(c) Write the balanced equation when this oxide is dissolved in water**

   **(d) Draw the electron dot structure for the formation of this oxide.**

7. **Hydrogen occupied a unique position in the modern periodic table. Justify the statement.**

8. **Table given below shows a part of the periodic table**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **H** | | | | | | | **He** |
| **Li** | **Be** | **B** | **C** | **N** | **O** | **F** | **Ne** |
| **Na** | **Mg** | **Al** | **Si** | **P** | **S** | **Cl** | **Ar.** |

**Using this table explain why**

**(a) Li and Na are considered as active metals**

**(b) Atomic size of Mg is less than that of Na**

**(c) Fluorine is more reactive than chlorine**

9. **Choose from the following**

   **$_{6}C$ $_{8}O$ $_{10}Ne$ $_{11}Na$ $_{14}Si$**

   **(a) Elements that should be in the same period**

   **(b) Elements that should be in the same group state reason for your selection in each case.**

10. **In the periodic table , how does the tendency of atoms to lose electrons change on going from**

**(i) left to right across a period**

**(ii) top to bottom in a group**

**11. Gives reasons**

**(1) Elements in a group have similar chemical properties.**

**(2) Elements of group 1 forms ions with a charge of +1.**

**12. F , Cl, and Br are the elements each having seven valence electrons. Which of these**
**(a) has the largest atomic radius**
**(b) is most reactive?. Justify your answer stating reason for each.**

**13. Which two criteria did mandeleev use to classify the elements in his periodic table. State mandeleev's periodic law.**
**why could no fixed position be given to hydrogen in mandeleev's P.T.**