**Total No. of printed pages : 2**

**SCHOOL NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
 WORKSHEET – 2/Module-2**

**Sub: CHEMISTRY Class : XI**

**Lesson : CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No.:\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_**

**Maximum Marks : 20 Marks Obtained: \_\_\_\_\_**

**I. (MULTIPLE CHOICE QUESTION)MCQS (10X1=10M)**

**1. The correct order of variation in the sizes of atoms is**

**a) Be>C>F>Ne b) Be<C<F<Ne c) Be>C>F<Ne d) F>Ne>Be>C**

**2. Van der waal’s radius is used for**

**a) Molecular substances in gaseous state only  
 b) Molecular substances in liquid state only  
 c) Molecular substances in solid state only   
 d) Molecular substances in any state**

**3.In a period, atom with smaller radius is  
 a) Chalcogen b) Halogen c) Aerogen d) Pnicogen**

**4. The correct order of aize of various species of ions is**

**a) Fe<Fe2+<Fe3+ b) Fe+=Fe2+<Fe   
 c) Fe=Fe2+>Fe3+ d) Fe3+ <Fe2+<Fe**

**5. A reduction in atomic size with increase in atomic number is a  
 characteristic of elements of**

**a) f-block b) Radioactive series c) High atomic mass d) d-block**

**6. The value of 1 eV/atom is**

**a) 23.06 Kcal/mol b) 96.45KJ/mole c) 1.602x10-19 Joules/atom d) all of these**

**7. The first ionisation potential is maximum for**

**a) Li b)Uranium c) Iron d) Hydrogen**

**8. The correct order of second I.P, values of carbon, nitrogen, oxygen and fluorine is   
a)C>N>O>F b) O>N>F>C  
c) O>F>N>C d) F>O>N>C**

**9.Ionization potential of Boron is less than that of Beryllium. This is because  
 a) B has 1s2 2s22p3 configuration b) B has small atomic size**

**c) B has higher nuclear charge d) B has more number of shells**

**10. Which of the following species has the highest ionization potential?**

**a) Li+ b) Mg+ c) Al+ d) Ne**

**II. ANSWER THE FOLLOWING QUESTIONS:- (10M)**

1. **Why Ionization Energy of N is higher than that of O? (1M)**
2. **Arrange the following ions in order of decreasing ionic radii: Li2+, He+,Be3+. (1M)**
3. **The Ionization energy values of an element are 191,578,872 and 5692   
   K cals. How many valence electrons are present in the element? (1M)**
4. **Out of different factor which affect the ionization potential, which are inversely proportional? (1M)**
5. **Give four examples of species which are isoelectronic with Ca2+?(2M)**

**6. How would you explain the fact that first ionisation enthalpy of sodium is  
 lower than that of magnesium but its second ionisation enthalpy is higher  
 than that of magnesium? (2M)**

**7. Would you expect the first ionization enthalpies for two isotopes of the  
 same element to be the same or different? Justify your answer. (2M)**

**….X….**