

XI Chemistry Worksheet

Time: 30 min Ch#3 : Classification of Elements and Periodicity in Properties -02 Full Marks: 20

Instructions:

1. All questions are compulsory.

2. Please give the explanation for the answer where applicable.

Q1 - How are the size of cation and anion related to corresponding neutral atoms?

(2 Marks)

Q2 - Arrange the following species in decreasing order of size. Give reasons also.

O^{2-} , F^- , Mg^{2+} , Na^+ , N^{3-}

(3 Marks)

Q3 - Give reasons for the following

(i) The size of Ga is smaller than Al.

(ii) BF_3 acts as Lewis acid.

(iii) CCl_4 does not undergo hydrolysis.

(iv) $PbCl_2$ does not react with chlorine to form $PbCl_4$.

(v) CO is poisonous in nature.

(5 Marks)

Q4 - Why IUPAC names are assigned to elements having atomic number > 100 ?

(1 Mark)

Q5 - Give two examples of metalloids.

(1 Mark)

Q6 - Electronegativity is the qualitative measure of the ability of an atom in a chemical compound to attract shared electrons towards itself.

(i) Name two scales which are used to measure the electronegativity of elements.

(ii) Name the element having highest electronegativity.

(2 Marks)

Q7 - Transition metals are widely used as catalysts in many organic and inorganic reactions. Why do these metals show catalytic property?

(1 Mark)

Q8 - The 1st, 2nd, 3rd and 4th ionization energies of an element are 899.5, 1757.1, 14848.7 and 21006.6 $KJmol^{-1}$ respectively. Name the group to which this element belongs.

(3 Marks)

Q9 - Atomic number of an element is 117. Write its electronic configuration and name the group of modern periodic table in which it is placed.

(2 Marks)