

**J.E.E./A.I.P.M.T.Foundation - XI Chemistry Worksheet**

**Time: 30 min Ch#3 : Classification of Elements and Periodicity in Properties -04 Full Marks: 20**

**Instructions:**

- 1. All questions are compulsory.**
- 2. Please give the explanation for the answer where applicable.**

Q1 - Explain Newland's law of octave.

(2 Marks)

Q2 - What are Dobereiner's triads?

(2 Marks)

Q3 - (i) What was Mendeleev's periodic law?

(ii) What are the advantages of his periodic table?

(3 Marks)

Q4 - Give reasons for the following

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

(ii)  $\text{BF}_3$  acts as Lewis acid.

(iii)  $\text{CCl}_4$  does not undergo hydrolysis.

(iv)  $\text{PbCl}_2$  does not react with chlorine to form  $\text{PbCl}_4$ .

(v) CO is poisonous in nature.

(5 Marks)

Q5 - Why IUPAC names are assigned to elements having atomic number  $> 100$ ?

(1 Mark)

Q6 - Write the modern day name of the element which Mendeleev named as Eka – aluminium and Eka – silicon

(1 Mark)

Q7 - Name the transition metal which has the highest melting point.

(1 Mark)

Q8 - Why does the first element of each group of p- block of modern periodic table shows anomalous properties?

(2 Marks)

Q9 - Predict the formula of the stable binary compounds that would be formed by the following pair of elements.

(i) Silicon and oxygen.

(ii) Gallium and chlorine.

(iii) Barium and bromine.

(3 Marks)