

## Chemistry Worksheet Class 10 on Chapter 5 Periodic Classification of Elements - Set 2

**Q1.** Newlands relation is also known as

- (a) Law of an octave
- (b) Atomic mass law
- (c) Both (a) and (b)
- (d) None of the above

**Q2.** The Law of an octave is valid up to which of the following element?

- (a) Calcium
- (b) Cobalt
- (c) Both (a) and (b)
- (d) None of the above

**Q3.** Which of the following element was discovered after the discovery of Mendeleev's periodic table?

- (a) Helium
- (b) Germanium
- (c) Both (a) and (b)
- (d) None of the above

**Q4.** How many elements were uncovered during the discovery of Mendeleev's periodic table?

- (a) Sixty-one
- (b) Sixty-three
- (c) Both (a) and (b)
- (d) None of the above

**Q5.** Which of the following element is known as eka-aluminium?

- (a) Germanium
- (b) Gallium
- (c) Indium
- (d) None of the above

**Q6.** What is the basis for classifying elements of the modern periodic table?

**Q7.** A metal X belongs to the 1st group of the modern periodic table. What will be the valency of metal X?

**Q8.** Out of Lithium, Carbon and Nitrogen, which element will form the most basic oxide and which form the most acidic oxide?

**Q9.** Initially, it was believed that the atomic mass of beryllium was 13. But Mendeleev suggested that its atomic mass should be 9.

- (i) Was Mendeleev's suggestion correct?
- (ii) How had he reached this Conclusion?

**Q10.** An element X belongs to the second period and group 15 of the periodic table. Find out

- (i) The number of valence electrons in its atoms.

(ii) Valency of the elements.

**Q11.** Identify the similarity in the atoms of pairs of elements given below:

(i) Na (Atomic number = 11) and

K (Atomic number = 19)

(ii) B (Atomic number = 5) and

C (Atomic number = 6)

**Q12.** How will the atomic size in a group and a period in the modern periodic table vary?

**Q13.** An atom of some element has electronic configuration 2, 8, 6.

(i) What is the atomic number of this element?

(ii) Name the element that shows chemical similarity with it.

**Q14.** The order of metallic character of elements A, B, C and D is  $D > A > C > B$ .

(i) What is the order of their electronegative character?

(ii) What is the nature of oxide of B if an oxide of A is amphoteric?

**Q15.** Write the reason for the following (number in parenthesis is the atomic number of the substance)

(i) Lithium (3) and sodium (11) are considered active metals.

(ii) Fluorine (9) is more reactive than chlorine (17).

**Q16.** The elements of the second and third periods of the periodic table are given below.

Li	Be	B	C	N	O	F
Na	Mg	Al	Si	P	S	Cl

(i) Which atom is bigger, Lithium or Beryllium? Why?

(ii) Which one element out of those given above is the most metallic and why?

**Q17.** The atomic number of elements A, B, C, D and E are given below.

Element	A	B	C	D	E
Atomic Number	7	10	12	4	19

From the above table, answer the following questions.

(i) Which two elements are chemically similar?

(ii) Which element is an inert gas?

**Q18.** What are valence electrons? Does the number of valence electrons increase or decrease on moving from left to right in a period.

**Q19.** How does the valency of elements vary in the period?

**Q20.** The atomic number of elements A, B and C are 11, 14 and 17, respectively.

(i) State the group to which these elements belong in the modern periodic table.

(ii) Write the formula of the compound formed when the elements B reacts with C.