Exercise-I

A. Very Short Answer Type Questions

Q.1 Classify as acidic, basic and amphoteric oxide Na_2O, Al_2O_3 and SO_2

Q.2 Pick the odd one out

(i) H, N, P, Na (ii) H, He, O, C

(iii) C, N, O, Cs (iv) Cs, Cl, Ca, Cd

Q.3 Give one example each of the following

(i) Metal belonging to Group 12.

(ii) Metal belonging to Group 2.

(iii) Non-metal belonging to the halogen group.

(iv) Most reactive halogen.

(v) Alkali metal which is radioactive.

Q.4 Give one example each of transition element, lanthanide, actinide and radioactive element.

Q.5 What are the vertical columns in the periodic table called ?

Q.6 Give an example of an element discovered after Mendeleev gave the periodic table

Q.7 An element of group 14 has an atomic number of 14. State whether this element will have metallic properties

Q.8 (i) What is the position of hydrogen in the periodic table?

(ii) Where are lanthanides and actinides placed in the periodic table?

Q.9 Two atoms A and B have the following distribution of protons and neutrons

Atoms	Protons	Neutrons
A	6	6
B	6	7

Which element do they represent? How are A and B related?

B. Short Answer Type Questions

Q.10 State the modern periodic law

Q.11 Explain Newland's law of octaves

Q.12 Give reasons for the following:

(i) Atomic size decreases as we move from left to right across a period

(ii) Atomic size increases as we move from top to bottom along a group.

Q.13 Fluorine, chlorine, bromine and iodine were put in one group on the basis of their similar properties.

(A) What is the name of this group or family?

(B) State two of these similar properties.

Q.14 Explain why potassium is more reactive than lithium and chlorine less reactive than fluorine.

Q.15 State two defects in Mendeleev's periodic table

Q.16 For the main groups of the periodic table, the metallic properties of the elements vary approximately with their position as shown in the chart below.

1	2	3	4	5	6	7	0
H							He
A							B
C							D

Find A, B, C, D

C. Long Answer Type Questions

Q.17 What were the early attempts to classify the elements?

Q.18 What is meant by the statement, 'properties of elements are a periodic function of atomic number'?

Q.19 Define the following:

(A) group, (B) period, (C) representative elements' (D) transition elements,

(e) lanthanides and (F) actinides

Q.20 Sodium and aluminium have atomic numbers 11 and 13 respectively. They are separated by one element in the periodic table and have valencies of 1 and 3 respectively. Chlorine and potassium are also separated by one element in the periodic table. Their atomic numbers are 17 and 19 respectively, but both have a valency of 1.Explain why.

Q.21 How does the modern periodic table differ from the Mendleeve's periodic table

Q.22 Write a short note on the following:

(i) Dobereiner's triads

(ii) Newland's law of octaves

(iii) Lothar Meyer's curves

Q.23 Discuss the variation in the following along a group and a period:

(i) Atomic size (ii) Ionization energy

(iii) Metallic character (iv) Electron affinity

(v) Chemical reactivity

Exercise-II

A. Fill in the blanks

Q.1 Vertical columns of elements in the periodic table are called.....

Q.2 The number of electrons in the valence shell of the atom of an element indicates the .....to which the element belongs.

Q.3 The first period contains .....elements.

Q.4 The oxides of the elements of groups 1 and 2 are ..... in nature.

Q.5 Electronegativity .....along a group from top to bottom.

Q.6 Alkali metals belong to group ..... and halogens belong to group .....in the periodic table.

Q.7 The basis of modern periodic table is.....

B. True /False Type Questions

Q.8 Elements of a group have the same chemical properties.

Q.9 Element with least ionization energy is Ceasuim.

Q.10 The element with configuration ns^2np^5 will belong to group 17.

Q.11 Helium is the noble gas with least atomic size

Q.12 Elements having atomic numbers 57 to 71 constitute the lanthanide series.

Q.13 The nature of an element can be predicated on the basis of its position in the periodic table.

Q.14 Within a group, various elements show variation in properties

Q.15 From top to bottom in a group, electronegativity increases.