Class-10 Subject - Science (Chemistry) 8.10.20

Metals & Non-metals Assignment-2

1. Define the following
Malleability, Ductility, Amphoteric oxide (give equations as example)
Anodising, Aquaregia,
Reactivity series of metals, Electrovalent bond,
Electrovalent or ionic compound,

2. Explain with an experiment
a) Metals are good conductors of heat
b) Metals are good conductors of electricity

3. What happens when (give equation also)
a) copper is heated in air
b) Sodium oxide is dissolved in water
c) Al is treated with steam
d) Red hot iron treated with steam

4. Give reasons :-
a) Na kept immersed in kerosene oil
b) Hydrogen gas is not evolved when a metal reacts with nitric acid
c) If you add Cu wire in ferrous sulphat solution, no reaction occurs.
d) Ionic compounds (in molten state or in aqueous solution) are good conductors of electricity.
e) Ionic compounds generally have high melting and boiling points.

4. Give reasons

b) Ionic compounds or electrovalent compounds are generally soluble in water, but insoluble in solvents such as kerosene, petrol etc.

5. Show the formation of Na_2O, MgO, $MgCl_2$, $AlCl_3$ by the transfer of electrons.

6. With an experiment arrange the following elements in their increasing order of reactivity.

Al, Na, Cu, Fe

7. Samples of four metals A, B, C and D were taken and added to the following solution one by one. The results obtained have been tabulated as follows:-

Metal	$FeSO_4$	$CuSO_4$	$ZnSO_4$	$AgNO_3$
A	No reaction	Displacement	—	—
B	Displacement	—	No reaction	—
C	No reaction	No reaction	No reaction	No reaction
D	No reaction	No reaction	No reaction	No reaction

i) Which is the most reactive metal?

ii) What would you observe if B is added to a solution of copper (II) sulphate.

iii) Arrange the metals A, B, C, D in the order of decreasing reactivity.