

CHEMISTRY (XII)

CHAPTER 1 (Periodic Classification of Elements)

Short Questions:

1. What are hydrides? What is the trend of boiling points of hydrides of group VI down the group?
2. Write name and symbol of an element from s block that has zero oxidation state. Also write its electronic configuration.
3. Why melting and boiling points of elements belonging to groups VA to VIIA are lower? Discuss the trend of ionization energy in the periodic table.
4. Give two defects of Mendeleev's periodic table.
5. Define Mendeleev's and modern periodic law.
6. Give four improvements made in Mendeleev's periodic law.
7. Why diamond is a non-conductor and graphite fairly a good conductor of electricity?
8. Define electron affinity. Discuss its trend in the periodic table.
9. How do you justify the position of hydrogen at the top of alkali metals (group IA)?
10. How does hydrogen resemble with alkali metals?
11. Why hydrogen can be placed over group IVA of the periodic table?
12. Why the oxidation states of noble gases are usually zero?
13. Why metallic character increases from top to bottom in a group of metal?
14. Why do metals conduct electricity?

OR

Why the metals are good conductors?

15. Why alkali metals give ionic hydrides?
16. Zn, Cd, Hg were placed along with alkaline earth metals in Mendeleev's periodic table. How this confusion was removed in Modern periodic table?
17. What is Lanthanide contraction?
18. Name various classes of hydrides.
19. Oxidation states usually remain same in a group. Why?
20. Give any two resemblances of hydrogen with IVA elements.
21. What are amphoteric oxides? Give an example.
22. Hydration energies of ions are in the following order. $Al^{+3} > Mg^{+2} > Na^{+1}$ justify it.
23. Why do ionization energies decrease down the group and increase left to right?
24. Why $PbCl_2$ is ionic but $PbCl_4$ is fairly covalent compound?
25. What happens when acidic and basic oxides combine with each other?

LONG QUESTIONS:

1. Define hydration energy. Explain it with suitable example.
2. Explain periodic trends in the following properties.
 - a. Atomic radius
 - b. Electron affinity
3. Discuss the position of hydrogen in Group IVA of the periodic table.
4. Justify the position of hydrogen at the top of group IA and VIIA of the periodic table.
5. Explain variation of following along groups and periods of periodic table:
 - a. Ionization potential
 - b. Electrical conductivity
6. What are halides? Give their types and properties.
7. What are halides? Classify them on the basis of nature of Bonding. Discuss covalent halides in details.
8. What are hydrides? Give their classification.
9. Write two similarities and two differences of hydrogen with IA group elements (alkali metals).
10. Write two similarities and two differences of hydrogen with IVA group elements.
11. Define ionization energy. Give its units. Discuss the effects of three factors on the ionization energy values of elements.