PERIODIC CLASSIFICATION OF ELEMENTS

ONE MARKS QUESTION

1. What is the position of hydrogen in the modern periodic table?
2. Where are the isotopes of the same elements having different atomic masses placed in the periodic table?
3. An element M is the third group of the periodic table. Write the formula of its oxide?
4. What is the valancy of magnesium with atomic no. 12 and chlorine with atomic no. 17?
5. What is the difference in number of shell in magnesium and Sulphur?
6. Give an example of Dobereiner's triad.
7. What is the basis of Mendeleev's periodic table?

TWO MARKS QUESTION

8. State the modern periodic law for classification of elements. How many groups and periods are there in the modern periodic table?
9. Name two elements that show chemical properties similar to bromine .Give reason.
10. An atom has electronic configuration 2, 8,2.

(i) What is the atomic no. of this element?

(ii) Is it a metal or non-metal?

11. Give reason as to why the atomic radii of elements increase in a group while moving from top to bottom ? (2)
12. Element in a group of periodic table have similar chemical properties why ? (2)

(i) Explain why atomic number is more important than atomic weight in determining chemical properties ?

13. In a group reactivity of metals increases while those of non metals decreases . Explain.

14. Elements in a group of periodic table have similar chemical properties why.
15. Elements of group 18 are called zero group. Why?

THREE MARKS QUESTION

16. An element 'M' has atomic number 11.

(i) Write its electronic configuration.

(ii) State the group to which 'M' belongs.

(iii) Is 'M' a metal or a non-metal?

(iv) Write the formula of its chloride.

17. where in periodic table do we find :

i)elements classified as non metal .

ii) elements forming negative ions .

iii)elements with high melting points .

iv)elements forming positive ions .

18. The elements Li(Z = 3), Na (Z = 11)and K (Z = 19) belong to group 1

(i) Predict the periods they belong.

(ii)Which one of them is least reactive?

(iii) Which one of them has the largest atomic radius? Give reason to justify.

19. F, Cl and Br are the elements each having seven valence electrons.

Pick the element (i) with the largest atomic radius (ii) which is most reactive. Justify your answer.

20. Nitrogen (Z = 7) and Phosphorus (Z = 15) belong to same group-15 of the periodic table.

Write the electronic configuration of these two elements. Which of these two is more electronegative? Why?

21. which among the following elements whose atomic number are given below belong to the
(i) Same period? Give the reason (17,10,20,12,19,15)

22. Element X with atomic 12 and element Y with atomic number 17 reacts with hydrogen to
(i) Form hydrides. Which of them is expected to have high melting points?

23. Why is position of hydrogen not justified in modern periodic table?

FIVE MARKS QUESTION

24. Write the electronic configuration of atoms of :

a) Potassium (K) b)argon (Ar) c)lithium (li) d) fluorine (F) e) chlorine (Cl)

25. i) Why is potassium more reactive than lithium?

ii) Why fluorine is more reactive than chlorine?

iii) Which is smaller in size Cl or Ar?

iv) Which is smaller in size Li or F ?

v) Which is more electronegative F or Cl?

26. The atomic no. of an element is 17.

i) What is its valency?

ii) Whether it is a metal or non-metal?

iii) Whether it is bigger or smaller in size then an element of atomic no.18?

iv) What type of bonds it will form with elements of group 18?

v) How would its oxide behave with litmus solution?

27. (i) How does atomic size vary along the group? Give reason.

(ii) Why are metals electropositive in nature?

(iii) What are metalloids? Give an example.

28. Name-

(i) Two elements that have a single electron in their outermost shells.

(ii) Two elements that have two electrons in their outermost shells.

(iii) Two elements with filled outermost shell.

(iv) Two elements that belong to halogen family.

(v) An element which is tetravalent and forms the basis of organic chemistry.