

CHEMISTRY STUDY MATERIALS FOR CLASS 10

(MCQ based on: Periodic Classification of Elements)

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QUESTIONS WITH ANSWERS

1. On going down in a group of the periodic table, the size of atoms _____

Answer: increases

2. Those elements which have the same valence shell, belongs to the same _____ of the periodic table.

Answer: period

3. When an element from the left side of the periodic table combines with an elements from the right side of the periodic table, _____ bond is formed

Answer: ionic

4. Group _____ locate the element with electronic configuration 2,7 in the modern periodic table.

Answer: 17

5. Dobereiner's system of classification was failed to arrange all the elements in the form of _____ having similar chemical properties.

Answer: triads

6. Diagonal elements from boron to polonium are known as _____ .

Answer: metalloids

7. How many elements are known the date?

Answer: 118 elements are known till date

8. How many elements are occurring naturally?

Answer: 94

9. What was need of classification of elements?

Answer: Classification of elements is needed to 'more the study of elements every, e.g. elements of same group have similar properties study of a large number of elements is reduced to few group of elements.

10. What was the earliest attempt to classify elements?

Answer: They were classified into metals and non-metals.

11. How did Dobereiner classify the elements?

Answer: He classified elements in group of three, such that atomic weight of middle element is average of 1st and 3rd element.

12. Give one example of such triads.

Answer: Li(7), Na(23), K(39)

13. Why was the system of classification of elements into triads not found suitable?

Answer: It is because all the elements discovered at that time could not be classified into triads.

14. What was the basis of classification of elements by Newland?

Answer: Increasing order of atomic mass

15. What was the basis of Mendeleev's Periodic Law?

Answer: Increasing order of atomic weight.

16. Why did Mendeleev's left some gaps?

Answer: These gaps were left for undiscovered elements.

17. Which chemical property of element was used by Mendeleev for classification?

Answer: Formula of hydrides and oxides.

18. Name any three metalloids.

Answer: Boron, Silicon and Germanium.

19. State the modern periodic law of classification of elements.

Answer: It states that "the properties of the elements are periodic functions of their atomic numbers."

20. What was the basis of Modern Periodic Law?

Answer: Atomic number

21. Who invented atomic number?

Answer: Moseley

22. Why is atomic number more important?

Answer: Chemical properties depend upon number of valence electrons which depend upon atomic number.

23. On what basis we can classify elements?

Answer: Similarity in properties.

24. Could Modern Periodic Table solve all the problems?

Answer: Yes, except position of hydrogen.

25. Write the formula used to determine the maximum number of electrons which a shell in an atom can accommodate.

Answer: Each shell has a maximum number of ' $2n^2$ ' electrons, where n is the shell number.

26. Write the number of vertical columns in the modern periodic table. What are these columns called?

Answer: There are 18 vertical columns in the modern periodic table. These vertical columns are called groups.
