

Periodic Classification of Elements

Question 1.

Which of the following statements about the Modern Periodic Table is correct?

- (a) It has 18 horizontal rows known as Periods
- (b) It has 7 vertical columns known as Periods
- (c) It has 18 vertical columns known as Groups
- (d) It has 7 horizontal rows known as Groups

▼ [Answer](#)

- (c) It has 18 vertical columns known as Groups
-

Question 2.

Modern Periodic law is based upon:

- (a) Number of neutrons
- (b) Number of electron
- (c) Atomic number
- (d) Atomic mass

▼ [Answer](#)

- (c) Atomic number
-

Question 3.

In Mendeleev's Periodic Table, gaps were left for the elements to be discovered later. Which of the following elements found a place in the periodic table later ?

- (a) Germanium
- (b) Chlorine
- (c) Oxygen
- (d) Silicon

▼ [Answer](#)

- (a) Germanium
-

Question 4.

Which of the following set of elements is written in order of their increasing metallic character?

- (a) Na Li K
- (b) C Q N
- (c) Mg Al Si
- (d) Be Mg Ca

▼ [Answer](#)

- (d) Be Mg Ca
-

Question 5.

The non-metals are present:

- (a) On the right hand side of the periodic table.
- (b) In the middle of the periodic table.
- (c) In the centre of the periodic table.
- (d) On the left hand side of the periodic table.

▼ [Answer](#)

(a) On the right hand side of the periodic table.

Question 6.

An element has 12 protons. The group and period to which this element belongs to is

- (a) 2nd group, 3rd period
- (b) 2nd group, 2nd period
- (c) 3rd group, 2nd period
- (d) 3rd group, 3rd period

▼ [Answer](#)

- (a) 2nd group, 3rd period
-

Question 7.

Which one of the following statements is not correct about the trends in the properties of the elements of a group on going down in a group?

- (a) The chemical reactivity of metals increases.
- (b) The metallic character of elements increases.
- (c) The size of the atom increases.
- (d) The valence electrons increase.

▼ [Answer](#)

- (d) The valence electrons increase.
-

Question 8.

An element X combines with oxygen to form an oxide XO. This oxide is electrically conducting. Write the formula of the compound formed when X reacts with chlorine.

- (a) XCl_3
- (b) XCl
- (c) XCl_2
- (d) XCl_5

▼ [Answer](#)

- (c) XCl_2
-

Question 9.

An element 'A' belongs to the third period and group 16 of the Periodic Table. Find out the valency of A.

- (a) Valency = 6
- (b) Valency = 2
- (c) Valency = 1
- (d) Valency = 3

▼ [Answer](#)

- (b) Valency = 2
-

Question 10.

Which of the following is the outermost shell for elements of second period?

- (a) K shell
- (b) L shell
- (c) M shell
- (d) N shell

▼ Answer

(b) L shell

Question 11.

Dobereiner's triad arranged the elements with similar properties into:

- (a) Periods
- (b) Groups
- (c) Both period and group
- (d) None of these

▼ Answer

(b) Groups

Question 12.

Element X forms a chloride with the formula XCl_2 , which is a solid with high melting point. X would most likely be:

- (a) Si
- (b) Al
- (c) Na
- (d) Mg

▼ Answer

(d) Mg

Question 13.

Pick out the chemically most reactive elements from the given triads.

Li, Na, K F, Cl, Br

- (a) Li and F
- (b) Li and Br
- (c) K and F
- (d) K and Br

▼ Answer

(c) K and F

Question 14.

What is the atomic number of element of period 3 and group 17 of the Periodic Table?

- (a) 10
- (b) 4
- (c) 17
- (d) 21

▼ Answer

(c) 17

Question 15.

Where would you locate the element with electronic configuration 2, 8 in the Modern Periodic Table?

- (a) Group 8
- (b) Group 2

- (c) Group 18
- (d) Group 10

▼ [Answer](#)

- (c) Group 18
-

Question 16.

An atom of an element has the electronic configuration 2,8,2. To which group does it belong?

- (a) 4th group
- (b) 6th group
- (c) 3rd group
- (d) 2nd group

▼ [Answer](#)

- (d) 2nd group
-

Question 17.

New lands relation is called

- (a) Musical Law
- (b) Law of Octaves
- (c) Periodic Law
- (d) Atomic Mass Law

▼ [Answer](#)

- (b) Law of Octaves
-

Question 18.

At the time of Mendeleev, the number of elements known was

- (a) 63
- (b) 65
- (c) 62
- (d) 64

▼ [Answer](#)

- (a) 63
-

Question 19.

According to IUPAC recommendations, the number of groups in the long form of the periodic table is:

- (a) 7
- (b) 8
- (c) 16
- (d) 18

▼ [Answer](#)

- (d) 18
-

Question 20.

The most distinctive property of the noble gases is that they are:

- (a) Unreactive
- (b) Radioactive

- (c) Metalloid
- (d) Metallic

▼ [Answer](#)

- (a) Unreactive
-

Question 21.

Upto which element, the Law of Octaves was found applicable?

- (a) Oxygen
- (b) Calcium
- (c) Cobalt
- (d) Potassium

▼ [Answer](#)

- (b) Calcium
-

Question 22.

As we move from left to right in a period in modern periodic table, Atomic sizes of the elements generally

- (a) increase
- (b) decrease
- (c) remain same
- (d) approach zero

▼ [Answer](#)

- (b) decrease
-

Question 23.

The arrangement of elements in the Modern Periodic Table is based on their

- (a) increasing atomic mass in the period
- (b) increasing atomic number in the horizontal rows
- (c) increasing atomic number in the vertical columns
- (d) increasing atomic mass in the group

▼ [Answer](#)

- (b) increasing atomic number in the horizontal rows
-

Question 24.

Carbon belongs to the second period and Group 14. Silicon belongs to the third period and Group 14. If atomic number of carbon is 6, the atomic number of silicon is

- (a) 7
- (b) 14
- (c) 24
- (d) 16

▼ [Answer](#)

- (b) 14
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Question 24.

In Mendeleev's Periodic Table, gaps were left for the elements to be discovered later. Which of the following elements found a place in the Periodic Table later?

- (a) Chlorine

- (b) Silicon
- (c) Oxygen
- (d) Germanium

▼ [Answer](#)

- (d) Germanium
-

Question 25.

The law of the modern periodic table was proposed by:

- (a) H.G.I Moselly
- (b) Dobereincer
- (c) D.I. Mendeleev
- (d) Newlands

▼ [Answer](#)

- (a) H.G.I Moselly
-

Question 26.

The elements A, B and C belong to groups 1, 14 and 17 respectively of the Periodic Table. Which two elements will form ionic compounds?

- (a) A and B
- (b) A and C
- (c) B and C
- (d) None

▼ [Answer](#)

- (b) A and C
-

Question 27.

Which one of the following statements is not correct about the trends in the properties of the elements of a period on going from left to right?

- (a) The oxides become more acidic
- (b) The elements become less metallic
- (c) There is an increase in the number of valence electrons
- (d) The atoms lose their electrons more easily

▼ [Answer](#)

- (d) The atoms lose their electrons more easily
-

Question 28.

Name the neutral atom in the Periodic Table which has the same number of electrons as K^+ and Cl^- .

- (a) Helium
- (b) Argon
- (c) Neon
- (d) Krypton

▼ [Answer](#)

- (b) Argon
-

Question 29.

An element X has mass number 40 and contains 21 neutrons in its atom. To which group of the Periodic Table does it belong?

- (a) Group 1
- (b) Group 4
- (c) Group 2
- (d) Group 3

▼ [Answer](#)

- (a) Group 1
-

Question 30.

How many elements are placed in lanthanide and actinide series?

- (a) 57, 89
- (b) 14, 14
- (c) 89, 57
- (d) 14, 16

▼ [Answer](#)

- (b) 14, 14
-

Question 31.

Which of the following elements of noble gases participate in chemical reaction?

- (a) Kr, Rn
- (b) He, Kr
- (c) Rn, He
- (d) He, Ne

▼ [Answer](#)

- (a) Kr, Rn
-

Question 32.

The element which has least tendency to lose electron is

- (a) H
- (b) Li
- (c) He
- (d) Ne

▼ [Answer](#)

- (c) He
-

Question 33.

The metal which is hard and has high melting point and used in filaments of electrical bulbs is

- (a) Ni
- (b) Fe
- (c) Pt
- (d) W

▼ [Answer](#)

- (d) W
-

Question 34.

Mendeleev's classification was based on.

- (a) Increasing atomic mass
- (b) Decreasing atomic number
- (c) Increasing atomic number
- (d) Decreasing atomic mass

▼ [Answer](#)

- (a) Increasing atomic mass
-

Question 35.

The elements of group 16 are called

- (a) Chalcogens
- (b) Halogens
- (c) Pnicogens
- (d) Noble gases

▼ [Answer](#)

- (a) Chalcogens
-

Question 36.

Nitrogen and phosphorus belong to the group 15 of the periodic table. Which of these will be more electro negative?

- (a) Phosphorus
- (b) Both are equally electro negative
- (c) Nitrogen
- (d) None of these

▼ [Answer](#)

- (c) Nitrogen
-

Question 37.

Which one of the following elements exhibit the maximum number of valence electrons?

- (a) Na
- (b) Al
- (c) Si
- (d) P

▼ [Answer](#)

- (d) P
-

Question 38.

Up to which element, the Law of Octaves was found to be applicable:

- (a) Oxygen
- (b) Calcium
- (c) Cobalt
- (d) Potassium

▼ [Answer](#)

- (b) Calcium
-

Question 39.

Chlorine (17) belongs to which group and period

- (a) 7, 3
- (b) 17, 3
- (c) 1, 3
- (d) 16, 3

▼ [Answer](#)

- (b) 17, 3
-

Question 40.

Which of the following sets of elements do not belong to the same group?

- (a) F, Cl, Br
- (b) Na, K, Rb
- (c) P, S, Cl
- (d) C, Si, Ge

▼ [Answer](#)

- (c) P, S, Cl
-

Question 41.

What is the basis of long form of the periodic table?

- (a) Atomic mass
- (b) Atomic number
- (c) Atomic size
- (d) Metallic and Non-metallic character

▼ [Answer](#)

- (b) Atomic number
-

Question 42.

Which of the following is most reactive

- (a) Li
- (b) H
- (c) Na
- (d) K

▼ [Answer](#)

- (d) K
-

Question 43.

The element with atomic number 14 is hard and forms acidic oxide and a covalent halide. To which of the following categories does the element belong?

- (a) Metal
- (b) Metalloid
- (c) Non-metal
- (d) Left-hand side element

▼ [Answer](#)

- (b) Metalloid
-

Question 44.

Assertion: There are 118 elements discovered so far.

Reason: Sulphur (16) belongs to Group 16 and belongs to 3rd period.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ [Answer](#)

- (b) Both A and R are true but R is not the correct explanation of A.
-

Question 45.

Assertion: K is more reactive than Na.

Reason: K is smaller in size than Na.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ [Answer](#)

- (c) A is true but R is false.
-

Question 46.

Assertion: Fluorine is more reactive than chlorine.

Reason: Fluorine and chlorine belong to Group 17 called Halogen.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ [Answer](#)

- (b) Both A and R are true but R is not the correct explanation of A.
-

Question 47.

Which of the following is most reactive

- (a) Li
- (b) H
- (c) Na
- (d) K

▼ [Answer](#)

- (d) K
-

Question 48.

What is the basis of long form of the periodic table?

- (a) Atomic mass
- (b) Atomic number
- (c) Atomic size
- (d) Metallic and Non-metallic character

▼ Answer

(b) Atomic number

Question 49.

An element has an atomic number of 15 with which of the following elements will it show similar chemical properties.

- (a) Be (4)
- (b) Ne (10)
- (c) N (7)
- (d) O (8)

▼ Answer

(c) N (7)

Question 50.

Which of the following is most reactive

- (a) F₂
- (b) Cl₂
- (c) Br₂
- (d) I₂

▼ Answer

(a) F₂
