CHEMISTRY

BOOKS - CHETAN CHEMISTRY (TAMIL ENGLISH)

PERIODIC CLASSIFICATION OF ELEMENTS

Fill In The Blanks And Rewrite The Complete Statement

1. Arrangement of xylem in a root.

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2. Petroleum is also known as _____ .

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3. _____ is known as time messenger.

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4. Vertical columns in the periodic table are called _____

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5. Define Modern periodic table .

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6. There are _____ periods in the periodic table

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7. The element eka-boron in Mehdeleev's periodic table is known as _____ in the Modern Periodic table.

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8. Define Modern periodic table .

Watch Video Solution

9. Horizontal rows in periodic table are called _____

10. _____ is a radioactive in group one elements

11. State true or false: The d-block elements are called transition elements.

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12. Fill in the blanks : The element which possess character of both metals and non-metals are called _____.

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13. The nucleus of some elements is _____.

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14. The valency of alkali metals is _____.

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15. Three elements with filled outermost shell .

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16. Group II A elements are called as _____ .

Watch Video Solution

17. Group 16 of the periodic table is called as _____

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18. Frequency is expressed in

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19. Alkaline earth metals belong to _____ group of the periodic table.

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20. Group numbers 3 to 12 in the periodic table are called .....

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21. electrons present in the outermost shell of an atom _____

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22. The valency of an element is determined by the number of _____ electrons present in the outermost shell of an atom.

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23. An element is placed in 2nd period, so it has _____ shells.

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24. The group with valency zero is called_____ .

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25. An atom is said to be a non-metal if it _____ electrons.

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26. _____ is the only element in duplet state.

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27. Second group elements are called as _____.

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28. 14^{th} group elements are called as _____.

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29. Group II A elements are called as _____ .

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30. The third period contains _____ elements .

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31. Write in ascending order, the radioactive elements according to the atomic number.

N_P , Pu, U, Pa

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32. As we go down a group, the number of shells goes on _____ .

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33. Rubidium belongs to _____ group of metals

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34. Metalloids are _____ at room temperature.

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Find The Odd Word Out

1. Lithium, Beryllium, Boron, Chlorine

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2. Find odd one: Helium, Radon, Argon, Boron

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3. Find odd one::Chlorine, Bromine, Iodine, Oxygen

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4. Sodium, Lithium , Copper , Beryllium

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5. Dalton, Dobereiner , Moseley , Newlands

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6. Boron, Silicon, Potassium , Antimony

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7. Aluminium, Argon , Xenon, Sodium

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8. Boron, Silicon, Neon , Polonium

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9. Lithium, Magnesium , Sodium , Potassium

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10. Chlorine, Bromine, Arsenic, Fluorine

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Complete The Analongy

1. Dobereiner: Triad :: Newlands : _____

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2. Mendeleev's Periodic Table : Atomic mass :: Modern Periodic table : _____

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3. Hydrogen : First period :: Lithium : _____

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4. Fluorine : 2, 7 :: Chlorine : _____

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5. Group 1: Alkali metals :: _____ : Alkaline earth metals

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6. Transition elements : d-block :: Inner transition elements : _____

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7. Tellurium : _____ :: Radium : Metal

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8. Transition elements : _____ :: Inner transition elements: Three incomplete outermost shells

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9. Lanthanides : Ce to Lu :: Actinides: _____

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10. Ca : Alkaline earth metal :: Cs : _____

Watch Video Solution

11. Fe: Electropositive :: Cl: _____

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12. In $NaCl$, Na^+ ion has _____ and Cl^- ion has _____ electron configurations

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13. The valency of alkali metals is _____.

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State Whether The Following Statement Is True Or False If False Write The Correct Statement For The Same

1. Lithium, Potassium and Sodium are elements forming Dobereiner's triad .

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2. According to Mendeleev's periodic law, the properties of elements are a periodic function of their atomic numbers.

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3. State True or False : Arthopods are hermaphrodites

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4. State true or false: Group 1 elements in Modem Periodic table are referred as "alkali metals".

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5. State true or false: Argon is not an inert gas.

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6. How does electron affinity change when we move from left to right in a period in the periodic table ?

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7. State true or false:: Group 17 elements are known as Noble gases .

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8. State true or false: Eka-boron is known as Germanium.

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9. State true or false: f-block elements are metalloid.

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10. Non - metals are

Watch Video Solution

11. State true or false: Eka-boron is known as Germanium.

Watch Video Solution

12. State true or false: Argon is not an inert gas.

Watch Video Solution

13. State True or False: The gaps on the cyton are called Nodes of Ranvier.

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14. State true or false: Isotopes have similar chemical properties.

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15. State true or false: Isotopes have same atomic masses.

Watch Video Solution

16. State true or false: Argon is not an inert gas.

Watch Video Solution

17. State true or false: The d-block elements are called transition elements.

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Answer The Following

1. The atom having the smallest size.

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2. Which one of the following is the smallest atom?

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3. The most electronegative element of the periodic table is _____

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4. The smallest human cell is

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5. The most reactive metal.

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6. The number of electrons in the outermost shell of alkali metals is _____ .

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7. The absolute zero is _____

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8. The family of metals having valency one is known as_____

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9. The family of metals having valency two is known as_____.

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10. The family of metals having valency one is known as_____

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11. Both second and third period contain _____.

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12. Non - metals are

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13. Valency

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Name The Following

1. which three elements having 7 electrons in their outermost shell?

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2. Inert elements

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3. which three elements having a single electron in their outermost shell?

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4. Name the two elements which are derived from the country.

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5. Alkaline earth metals are

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6. State and explain Dobereiner's "Triad" .

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7. The scientist who classified elements on the basis of atomic number.

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8. The scientist who classified elements on the basis of atomic mass .

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9. The number of groups in the periodic table is

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10. Series of 14 elements placed below the periodic table having atomic no. from 58 to 71 [Ce to Lu]

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11. Series of 14 elements placed below the periodic table having atomic no. from 90 to 103 [Th to Lr]

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Choose And Write The Correct Options

1. The valency of alkali metals is _____.

A. a.1

B. b.2

C. c.3

D. d.7

Answer: A

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2. Thes shortest period in the modern periodic table is _____ period.

A. Group 2

B. Group 16

C. Period 2

D. d-block

Answer: A

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3. Molecular formula of the chloride of an element Xis XCI. This compound is a solid having high melting point. Which of the

following elements be present in the same group as X.

A. Na

B. Mg

C. Al

D. Si

Answer: A

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4. In the periodic table where are the metalloids placed?

A. s-block

B. p-block

C. d-block

D. f-block

Answer: B

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5. State Johann Dobereiner's law of triads.

A. Li, Na, K

B. Ca, Sr, Ba

C. Mg, Ca, Sr

D. Cu, Ag, Au

Answer: C

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6. _____ resembles alkali metals as well as halogens.

A. Lithium

B. Sodium

C. Hydrogen

D. Silicon

Answer: C

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7. The electronic configuration of Sc is _____

A. (2, 8, 4)

B. (2, 8, 1)

C. (2, 8, 3)

D. (2, 8, 2)

Answer: D

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8. Which one of the following is in solid state at room temperature?

A. Fluorine

B. Chlorine

C. Bromine

D. Iodine

Answer: C

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9. Atomic radius of Lithium is _____ pm.

A. 41

B. 151

C. 152

D. 157

Answer: C

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Solve The Following

1. X,Y and Z are three members of a Doboreiner's triad . If the atomic mass of X is 7 and that of Z is 39 , what in the atomic mass of Y?

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2. Two elements X and Y have atomic number 12 and 16 respectively. Write the electronic configuration for these elements. To which period of the Modem Periodic table do these two elements belong?

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3. Identify Dobereiner's triads from the following groups of elements having similar chemical properties?

Mg (24.3), Ca (40.1), Sr (87.6)

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4. Identify Dobereiner's triads from the following groups of elements having similar

chemical properties?

S (32.1), Se (79.0), Te (127.6)

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5. Identify Dobereiner's triads from the following groups of elements having similar chemical properties?

Be (9.0), Mg (24.3), Ca (40.1)

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State The Laws Define

1. State the Newland's law of octaves.

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2. (a) State Mendeleev's periodic law.

(b) Describe about the merits of Mendeleev's periodic table.

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3. Modern Periodic Law:

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4. State and explain Dobereiner's "Triad" .

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5. Periods

Watch Video Solution

6. Groups

Watch Video Solution

7. Normal Elements

Watch Video Solution

8. Lanthanide Series

Watch Video Solution

9. Actinide Series

Watch Video Solution

10. Transition elements

Watch Video Solution

11. Inner Transition elements

Watch Video Solution

12. Atomic radius

Watch Video Solution

13. Define- Valency.

Watch Video Solution

14. Valency

Watch Video Solution

15. Inert elements

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16. Isotopes

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17. Metalloids

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Answer The Following Questions In One Or Two Sentences

1. What is meant by periodicity?

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2. How will the tendency to gain ele ctr o ns change as we go from left to right across a pe riod? Why?

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3. Why was Dobereiner's classification of elements not useful?

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4. In the periodic table where are the metalloids placed?

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5. Elements of which group are called as alkali metals?

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6. Which is the incomplete period in the Modern Periodic table?

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7. Which law was modified into Modern Periodic law?

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8. What are periodic properties ? Give example.

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9. Normal Elements

Watch Video Solution

10. On what basis is Potassium (Z = 19) placed in 4th period and group 1?

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11. How will you differentiate between metals and non-metals by the number of valence electrons?

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12. What are the types of matter?

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13. What are the types of elements?

Watch Video Solution

14. What are the smallest particles of matter called?

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15. What is the difference between the molecules of elements and compounds?

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16. What are the values of 'n' for the shells K, L and M?

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17. What is the maximum number of electrons that can be accommodated in a shell? Write the formula.

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18. Deduce the maximum electron capacity of the shells K, L and M?

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19. There are some vacant places in Mendeleev's Periodic table. In some of these places, the atomic masses are seen to be predicted. Enlist three of these predicted atomic masses along with their group and period

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20. Due to uncertainty in the names of some of the elements, a question mark is indicated

before the symbol in the Mendeleev's periodic table. What are such symbols?

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Write Short Notes On

1. State Mendeleev's period law.

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2. Structure of the Modem Periodic table.

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3. Justify the position of lanthanides and actinides in the periodic table .

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4. Why group 18 elements are called inert gases ? Write the general electronic configuration of group 18 elements.

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5. Transition elements

Watch Video Solution

6. Inner Transition elements

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7. Metal atom : Metallic radius :: Non-metallic element : _____

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Distinguish Between

1. What is the basic difference in approach between Mendeleev's periodic table and modern periodic table?

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2. Transition elements and Inner transition elements

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3. Inert gases and Normal Elements

Watch Video Solution

4. Groups and Periods of Modern Periodic Table

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5. Metallic character and Non-metallic character

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6. s-block elements and p-block elements

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7. Alkali metals and Alkaline earth metals

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Give Scientific Reasons

1. Atomic radius goes on decreasing while going from left to right in a period.

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2. Why Metallic character goes on decreasing while going from left to right in a period?

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3. Atomic radius goes on increasing down a group.

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4. Elements belonging to the same group have the same valency.

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5. The third period contains only eight elements even though the electron capacity of the third shell is 18.

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6. How Atomic number is a more fundamental property of an element than its atomic mass?

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7. Alkali metals are placed in Group 1.

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8. Inert gases exist in the form of free atoms.

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Answer The Following

1. An element has its electronic configuration as 2, 8, 2. Now anwswer the following questions :

What is the atomic number of this element ?

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2. An element has its electronic configuration as 2, 8, 2. Now anwswer the following questions :

What is the group of this element?

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3. An element has its electronic configuration as 2, 8, 2. Now anwswer the following questions :

To which period does this element belong?

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4. An element has its electronic configuration as 2, 8, 2. Now anwswer the following questions :

With which of the following elements would this element resemble? (Atomic numbers are given in the brackets) N (7), Be (4), Ar (18), Cl (17)

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5. Write down the electronic configuration of the following elements from the given atomic numbers. Answer the following questions with explanation.

$_3Li, _{14}Si, _2He, _{11}Na, _{15}P$ Which of these elements belong to period 3?

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6. Write down the electronic configuration of the following elements from the given atomic numbers. Answer the following questions with explanation.

$_1H, _7Na, _{20}Ca, _{16}S, _4Be, _{18}Ar.$ Which of these elements belong to the second group?

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7. Write down the electronic configuration of the following elements from the given atomic numbers. Answer the following questions with explanation.

$_7N, _6C, _8O, _5B, _{13}Al.$ Which is the most electronegative element among these?

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8. Write down the electronic configuration of the following elements from the given atomic

numbers. Answer the following questions with explanation.

$_4Be, _6C, _8O, _5B, _{13}Al$. Which is the most electropositive element among these?

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9. Write down the electronic configuration of the following elements from the given atomic numbers. Answer the following questions with explanation.

$_{11}Na$, $_{15}P$, $_{17}Cl$, $_{14}Si$, $_{12}Mg$. Which of these has the largest atom?

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10. Write down the electronic configuration of the following elements from the given atomic numbers. Answer the following questions with explanation.

$_{19}K$, $_{3}Li$, $_{11}Na$, $_{4}Be$. Which of these atoms has smallest atomic radius?

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11. Write down the electronic configuration of the following elements from the given atomic numbers. Answer the following questions with explanation.

$_{13}Al$, $_{14}Si$, $_{11}Na$, $_{12}Mg$, $_{16}S$. Which of the above elements has the highest metallic character?

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12. Write down the electronic configuration of the following elements from the given atomic numbers. Answer the following questions with explanation.

${}_6C, {}_3Li, {}_9F, {}_7N, {}_8O$. Which of the above elements has the highest non-metallic character?

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13. The following table shows the position of six elements A, B, C, D, E and F in the periodic table.

Out of D and E, which one has a bigger atomic radius and why?

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14. The following table shows the position of six elements A, B, C, D, E and F in the periodic

table.

Write a common name for the family of elements C and F?

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Explain The Following

1. Chlorine has two isotopes, viz, Cl -35 and Cl-37. Their atomic masses are 35 and 37. Their chemical properties are same. Where should

these be placed in Mendeleev's periodic table? In different places or in the same place?

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2. Write the molecular formulae of oxides of the following elements by referring to the Mendeleev's periodic table.

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3. Write the molecular formula of the compounds of the following elements with hydrogen.

(C, S, Br, As, F, 0, N, Cl)

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4. A metal M forms an oxide having the formula M_2O_3. It belongs to 3rd period in the Modem Periodic table. Write the atomic number and valency of the metal.

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5. What is the relationship between the electronic configuration of an element and its valency?

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6. The atomic number of beryllium is 4 while that of oxygen is 8. Write down the electronic configuration of the two and deduce their valency from the same.

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Answer The Questions Based On Modern Periodic Table

1. Use your ram power,

By referring to the Modem Periodic table find out the period to which the above elements belong?

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2. Use your ram power,

Arrange the above elements in a decreasing order of their atomic radii.

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3. Use your ram power,

Does this arrangement match with the pattern

of the second period of the Modern Periodic table.

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4. Use your ram power,

Which of the above elements have the biggest and the smallest atom?

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5. Use your ram power,

What is the periodic trend observed in the variation of atomic radius while going from left to right within a period?

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6. Use your brain power,

By referring to the Modern Periodic table find

out the group to which above elements belong?

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7. Use your brain power,

A rrange the above elements vertically downwards in an increasing order of atomic radii.

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8. Use your brain power,

Does this arrangement match with the pattern of the group 1 of the Modern Periodic table?

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9. Use your brain power,

Which of the above elements have the biggest and the smallest atom?

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10. Use your brain power,

What is the periodic trend observed in the variation of atomic radii down a group?

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11. Use your brain power,

Classify the elements of the third period into metals and non - metals.

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12. Use your brain power,

On which side of the period did you find the Non - metals?

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13. Use your brain power,

What is the cause of non - metallic character of element?

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14. Use your brain power,

What is the expected trend in the variation of non-metallic character of element from left to right in a period?

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15. Use your brain power,

What would be the expected trend in the

variation of non-metallic character of elements down a group?

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16. Can you tell,

Go through the Modem Periodic table (fig 2.1) and write the names one below the other of the elements of group 1.

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17. Can you tell,

Write the electronic configuration of the first four elements in this group.

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18. Can you tell,

What similarity do you find in the electronic configuration of group 1 elements?

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19. Can you tell,

How many valence electrons are there in each of these elements?

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20. Can you tell,

On going through the Modern Periodic table (fig 2.1) it is seen that the elements Li, Be, B, C, N, O, F and Ne belong to the period-2. Write down the electronic configuration.

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21. Can you tell,

Is the number of valence electrons same for all these elements?

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22. Can you tell,

Is the number of shells the same in these ?

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Write Answers With Explanation

1. How is the problem regarding the position of cobalt $\left({}^{59}Co\right)$ and nickel $\left({}^{59}Ni\right)$ in Mendeleev's periodic table resolved in Modern Periodic table?

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2. How did the position of $\_\ 17^{35}Cl$ and ${}^{37}_{17}Cl$ get fixed in the Modern Periodic table?

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3. Can there be an element with atomic mass 53 or 54 in between the two elements, Chromium $^{53}_{24}Cr$ and Manganese $^{55}_{25}Mn$?

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4. What do you think? Should hydrogen be placed in the group 17 of halogens or group 1 of alkali metals in the Modern Periodic table?

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Activity Based Questions

1. Consider isotopes of oxygen 160 and 180. Would you be able to place them in Mendeleev's Periodic Table?

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2. Find resemblance between hydrogen and alkali metals by writing compounds of both

with chlorine, sulphur and oxygen.

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3. How are isotopes of different elements placed in the Modem Periodic Table?

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4. What should be the position of Hydrogen in the Modem Periodic Table? Why?

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5. How do you calculate valency of an element from its electronic configuration?

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6. What is the valency of elements with atomic number 8, 14, 17 and 20?

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Paragraph Based Questions

1. Read the following paragraph and answer the questions given below:

Dmitri Ivanovich Mendeleev was the first to classify elements on the basis of their fundamental property, the atomic mass, and also on the similarity of chemical properties. When Mendeleev started his work, 63 elements were known. He examined the relationship between the atomic masses of the elements and their physical and chemical

properties. Among chemical properties Mendeleev concentrated on the compounds formed by the elements with oxygen and hydrogen. He selected hydrogen and oxygen as they were very reactive and formed compounds with most elements . The formulae of the hydrides and oxideswere treated as one of the basic properties of an element for its classification. He sorted out the elements with similar properties and pinned the cards together on a wall. He observed that most of the elements got a place in the periodic table and were arranged in the order

of their increasing atomic masses. It was also observed that there occurs a periodic recurrence of elements with similar physical and chemical properties . On this basis Mendeleev formulated a periodic law which states that "The properties of the elements are the periodic function of their atomic masses".

What was the basis of Mendeleev's classification?

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2. Read the following paragraph and answer the questions given below:

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What type of relationship of elements was examined by Mendeleev?

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3. Read the following paragraph and answer the questions given below:

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states that "The properties of the elements are the periodic function of their atomic masses".

How many elements were known when Mendeleev started his work?

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4. Read the following paragraph and answer the questions given below:

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masses".

What is meant by periodicity according to Mendeleev?

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5. Read the following paragraph and answer the questions given below:

Dmitri Ivanovich Mendeleev was the first to classify elements on the basis of their fundamental property, the atomic mass, and also on the similarity of chemical properties.

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What is Mendeleev's Periodic Law?

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6. Read the following paragraph and answer the questions given below:

In the Modem Periodic table, the elements are arranged in the increasing order of their atomic numbers . Thi s arrangement is based on the Modern Periodic law, which states that the properties of elements are a periodic function of their atomic numbers. In the Modern Peroidic table, each column is called a group and each row is called a period.

Elements within the same group show similarity and ggradation in properties. This is due to the same number of electrons in the outermost shell.

State the law on which mode,n periodic table is based.

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7. Read the following paragraph and answer the questions given below:

In the Modem Periodic table, the elements are

arranged in the increasing order of their atomic numbers . Thi s arrangement is based on the Modern Periodic law, which states that the properties of elements are a periodic function of their atomic numbers. In the Modern Peroidic table, each column is called a group and each row is called a period. Elements within the same group show similarity and ggradation in properties. This is due to the same number of electrons in the outermost shell.

How many groups are there in the modem periodic table?

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8. Read the following paragraph and answer the questions given below:

In the Modem Periodic table, the elements are arranged in the increasing order of their atomic numbers . Thi s arrangement is based on the Modern Periodic law, which states that the properties of elements are a periodic function of their atomic numbers. In the Modern Peroidic table, each column is called a group and each row is called a period.

Elements within the same group show similarity and ggradation in properties. This is due to the same number of electrons in the outermost shell.

What is the number of valence electrons in an element of group 1 and group 18 respectively?

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9. Read the following paragraph and answer the questions given below:

In the Modem Periodic table, the elements are

arranged in the increasing order of their atomic numbers . Thi s arrangement is based on the Modern Periodic law, which states that the properties of elements are a periodic function of their atomic numbers. In the Modern Peroidic table, each column is called a group and each row is called a period. Elements within the same group show similarity and ggradation in properties. This is due to the same number of electrons in the outermost shell.

What is the trend in the variation of valency while going down a group?

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10. Read the following paragraph and answer the questions given below:

In the Modem Periodic table, the elements are arranged in the increasing order of their atomic numbers . Thi s arrangement is based on the Modern Periodic law, which states that the properties of elements are a periodic function of their atomic numbers. In the Modern Peroidic table, each column is called a group and each row is called a period.

Elements within the same group show similarity and ggradation in properties. This is due to the same number of electrons in the outermost shell.

Which pair of elements do you think will have similar properties?

(a) Sodium and Argon

(b) Sodium and Potassium

(c) Potassium and Neon

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Answer In Detail

1. State the merits of Mendeleev's Periodic Table.

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2. What are the demerits of Mendeleev's periodic table?

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3. Merits of Modem Periodic table over Mendeleev's periodic table.

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4. Think about it,

What is the relationship between the electronic configuration of an element and its valency?

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5. Think about it,

The atomic number of beryllium is 4 while that of oxygen is 8. Write down the electronic configuration of the two and deduce their valency from the same.

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6. Think about it,

Write the Electronic configuration and valency of first 20 elements.

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7. Think about it,

What is the periodic trend in the variation of valency while going from left to right within a period. Explain the answer with reference to period 2 and period 3:

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8. Think about it,

What is the periodic trend in the variation of

valency while going down a group? Explain the answer with reference to group 1, group 2 and group 18.

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9. Comparative study of all the four-blocks of Modern Periodic table.

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10. How could the Modem Periodic Table remove various anomalies of Mendeleev's table?

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11. Answer the questions based on the given data.

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12. To which group do the elements belong? What is the family called?

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13. Arrange the above elements in an increasing order of atomic radii. Does this arrangement match with the pattern of the group in the above answer?

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14. Which of the above elements have the biggest . · and the smallest atom?

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15. What is the periodic trend observed in the variation of atomic radii down a group?

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16. In the following table, seven elements P, Q, R , S , T , U and V (here letters are not the usual symbols of the elements) of the modem periodic table with their atomic numbers are given.

Which of these is an inert gas? Name it.

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17. In the following table, seven elements P, Q, R , S , T , U and V (here letters are not the usual symbols of the elements) of the modem periodic table with their atomic numbers are given.

Which of these is a halogen? Name it.

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18. In the following table, seven elements P, Q, R , S , T , U and V (here letters are not the usual symbols of the elements) of the modem periodic table with their atomic numbers are given.

Which of these are metals? Name them.

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19. In the following table, seven elements P, Q, R , S , T , U and V (here letters are not the usual symbols of the elements) of the modem periodic table with their atomic numbers are given.

If Q combines with U, what would be the formula of the compound formed? If Q and U are replaced by their respective metal what will be the formula of the compound formed.

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20. In the following table, seven elements P, Q, R , S , T , U and V (here letters are not the usual symbols of the elements) of the modem periodic table with their atomic numbers are given.

Write the electronic configuration of Rand T, and the type of bond formed by their combination.

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21. Write the answers of the questions with reference to the structure of the periodic table.

Which points are considered for the arrangement of the Modern Periodic table?

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22. Write the answers of the questions with reference to the structure of the periodic table.

How are blocks indicated?

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23. Write the answers of the questions with reference to the structure of the periodic table.

Which elements are present near the zig zag line?

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24. Write the answers of the questions with reference to the structure of the periodic table.

Draw the electronic configuration of the period 2 elements of first group in the periodic table.

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25. A part of periodic table is shown in the following figure.

write the symbol of the element 'Q'.

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26. A part of periodic table is shown in the following figure.

Will elements 'R' and 'S' have same number of valence electrons ?

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27. A part of periodic table is shown in the following figure.

Arrange elements 'P', 'Q' and 'R' in increasing order of their metallic character.

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28. A part of periodic table is shown in the following figure.

What is the number of electrons in L shell of element T?

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29. A part of periodic table is shown in the following figure.

Name any two elements that will have properties similiar to that of element 'P'.

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30. Study the b'low given periodic table in which four elemeqts are indicated by alphabets: A, B, C and D

Which element is a metalloid? Name this element and also mention the metalloids in modem periodic table.

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31. Among 'A' and 'C' which element has larger atomic radius? Why?

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32. Identify element 'D' and write its electronic configuration. Also write the electronic configuration of the elements above and below 'D' in the same group.

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33. A scientist was studying reactions of metals and non-metals. He knew group 1 and 2 elements are metals while group 17 elements are non- metals. So, he chooses different elements from group 1, group 2 and group 17. What is the valency of magnesium?

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34. A scientist was studying reactions of metals and non-metals. He knew group 1 and 2 elements are metals while group 17 elements are non- metals. So, he chooses different elements from group 1, group 2 and group 17. Name the element in group 17 which forms a diatomic molecule and exists in solid state at room temperature.

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35. A scientist was studying reactions of metals and non-metals. He knew group 1 and 2 elements are metals while group 17 elements are non- metals. So, he chooses different elements from group 1, group 2 and group 17. Name the element in group 17 which belongs to the same period as sodium.

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36. A scientist was studying reactions of metals and non-metals. He knew group 1 and 2 elements are metals while group 17 elements are non- metals. So, he chooses different elements from group 1, group 2 and group 17. Write the formula of compound formed in the reaction between lithium and bromine.

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37. A scientist was studying reactions of metals and non-metals. He knew group 1 and 2 elements are metals while group 17 elements are non- metals. So, he chooses different elements from group 1, group 2 and group 17. Write the formula of compound formed in the reaction between calcium and fluorine.

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Assignment 2

1. Fill in the blanks:

In the family of alkali metals, the number of valence electrons is _____ .

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2. Name the following:

The most electronegative non-metal.

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3. Alkaline earth metals have valency 2. This means that their position in the Modern Periodic table is in _____ .

A. Group 2

B. Group 16

C. Period 2

D. d-block

Answer:

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4. State the Modern Periodic law.

5. Define Dobereiner's Triad.