



CHEMISTRY

BOOKS - CHETANA CHEMISTRY

(MARATHI ENGLISH)

Periodic Classifications of Elements

Exercise

1. Mendeleev arranged elements known at that time.

A. 30

B. 56

C. 63

D. 92

Answer:



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2. The element eka-boron in Mendeleev's periodic table is known as ____ in the Modern periodic table

A. Scandium

B. Gallium

C. Germanium

D. polonium

Answer:



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3. In the Modern periodic table, the elements are arranged in accordance with their _____.

A. atomic mass

B. colour

C. atomic number

D. physical state.

Answer:



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4. The _____ contains the group 1 and 2 elements

A. f-block

B. p-block

C. d-block

D. s-block

Answer:



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5. Elements showing properties of both metals and non-metals are called ____.

A. alloys

B. metalloids

C. noble metals

D. mixtures

Answer:



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

A. 2

B. 4

C. 6

D. 1

Answer:



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7. There are seven electrons in the outermost shell of the elements, such elements belong to the family of .

A. noble gases

B. alkali metals

C. halogens

D. alkaline earth metals

Answer:



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8. In the modern periodic table, the elements placed at the bottom of the periodic table are called as _____ elements

A. noble

B. normal

C. transition

D. innertransition

Answer:



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9. An element is placed in $2^{n}d$ period, so it has ___ shells

A. 3

B. 2

C. 4

D. 5

Answer:



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10. _____ is the only element in duplet state.

A. Neon

B. Argon

C. Helium

D. krypton

Answer:



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11. First period contains _____ elements.

A. 3

B. 4

C. 5

D. 2

Answer:



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12. The formula of chloride of a metal is MCl_2

the metal M belongs to _____group.

A. 1^{st}

B. 2^{nd}

C. 13th

D. 14th

Answer:



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

A. 1

B. 2

C. 3

D. 7

Answer:



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14. Alkali 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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15. Molecular formula of the chloride of an element X is XCl . This compound is a solid having high melting point. Which of the

following element be present in the same group as X.

A. Na

B. Mg

C. Al

D. Si

Answer:



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16. In which block of the modern periodic table are the non-metals present?

A. s-block

B. p-block

C. d-block

D. f-block

Answer:



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17. _____ resembles alkali metals as well as halogens

A. Lithium

B. sodium

C. hydrogen

D. silicon

Answer:



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18. First period consist of _elements .

A. 1

B. 8

C. 2

D. 4

Answer:



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19. Electronic configuration of Mg is ____

A. (2,8,4)

B. (2,8,1)

C. (2,8,3)

D. (2,8,2)

Answer:



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20. ___ is in liquid at room temperature .

A. Fluorine

B. chlorine

C. bromine

D. iodine

Answer:



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21. Elements showing properties of both metals and non-metals are called_____

A. alloys

B. metalloids

C. noble metals

D. mixtures

Answer:



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22. Electronic configuration of Mg is ____

A. (2,8,4)

B. (2,8,1)

C. (2,8,3)

D. (2,8,2)

Answer:



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23. Three elements having a single electron in their outermost shell .



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24. Find the odd one word out: Chlorine, Bromine, Arsenic, Fluorine



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25. State whether the following statement is

True or False :

The d-block elements are called transition elements



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



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27. Sodium is more metallic than Aluminium .



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28. ${}_{19}K, {}_3Li, {}_{11}Na, {}_4Be$.Which of these atoms has smallest atomic radius?



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

numbers. Answer the following questions with explanation. 1. ${}_{6}\text{C}$, ${}_{3}\text{Li}$, ${}_{9}\text{F}$, ${}_{7}\text{N}$, ${}_{8}\text{O}$. Which of the above elements has the highest non-metallic character?



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



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31. State the merits of Mendeleev's periodic table.



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32. How could the modern periodic Table remove various anomalies of Mendeleev's table?



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

| Groups | 1 | 2 | 3 to 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---------|---|---|---------|----|----|----|----|----|----|
| Periods | A | | | | | B | | | C |
| 3 | | D | | | E | | | | F |

Using

the above table , answer the following questions:

Which element is a metal with valency 2?



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

| Groups | 1 | 2 | 3 to 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---------|---|---|---------|----|----|----|----|----|----|
| Periods | A | | | | | B | | | C |
| 3 | | D | | | E | | | | F |

Using

the above table , answer the following questions:

Which element is a non-metal with valency 3?



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

| Groups \ Periods | 1 | 2 | 3 to 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|------------------|---|---|---------|----|----|----|----|----|----|
| 2 | A | | | | | B | | | C |
| 3 | | D | | | E | | | | F |

Using

the above table , answer the following questions:

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



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

| Groups \ Periods | 1 | 2 | 3 to 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|------------------|---|---|---------|----|----|----|----|----|----|
| 2 | A | | | | | B | | | C |
| 3 | | D | | | E | | | | F |

Using

the above table , answer the following questions:

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



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

| Groups \ Periods | 1 | 2 | 3 to 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|------------------|---|---|---------|----|----|----|----|----|----|
| 2 | A | | | | | B | | | C |
| 3 | | D | | | E | | | | F |

Using

the above table , answer the following questions:

What is the formula of compound formed between A and B?



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Example

1. Find the odd man out.

Lithium,beryllium,boron,Chlorine



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2. Find the odd man out.

Sodium,Lithium,Copper,Beryllium



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3. Find the odd man out.

Dalton, Dobereiner, Moseley, Newlands



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4. Find the odd man out.

boron, Silicon, potassium, antimony



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5. Find the odd man out.

Aluminium, Argon, Xenon, Sodium



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6. Find the odd man out.

boron, Silicon, potassium, antimony



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7. Find the odd man out.

Lithium, beryllium, boron, Chlorine



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8. Complete the analogy

Dobereiner:Triad::Newlands:_____



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9. Complete the analogy

Mendeleev's periodic Table: Atomic mass::

Modern periodic table:_____



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10. Complete the analogy

Hydrogen:First period ::Lithium: __



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11. Complete the analogy

Fluorine:2,7:: chlorine: ____



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12. Complete the analogy

Group 1: Alkali metals :: _____: alkaline earth metals



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13. Complete the analogy

Transition elements : d-block :: inner transition elements: _____



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14. Complete the analogy

Tellurium:-----: Radium: Metal



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15. Complete the analogy

Transition elements:-----Inner transition elements: Three incomplete outermost shells



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16. Complete the analogy

Lanthanides:Ce to Lu::Actinides:_____



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17. Complete the analogy

Ca:Alkaline earth metal:: Cs:_____



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18. Complete the analogy

Fe:Electropositive :: Cl:_____



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19. Complete the analogy

(Li,Na,K):_____::(F,Cl,Br): Group 17



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20. Complete the analogy

Valency of Na(2,8,1):1(One)::Valency of

P(2,8,5):_____



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21. Match the columns:

| Column A | Column B | Column C |
|---------------------|--|----------------|
| (i) Triad | (a) Lightest and negatively charged particle in all the atoms. | (1) Mendeleev |
| (ii) Octave | (b) Concentrated mass and positive charge | (2) Thomson |
| (iii) Atomic number | (c) Average of the atomic mass of the first and the third elements | (3) Newlands |
| (iv) Period | (d) Properties of the eighth element similar to the first | (4) Rutherford |
| (v) Nucleus | (e) Positive charge on the nucleus | (5) Dobereiner |
| (vi) Electron | (f) Sequential change in molecular formulae | (6) Moseley |



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22. Match the columns:

| Column A | Column B |
|---------------|----------------------|
| (1) Sodium | (a) Non-metal |
| (2) Sulphur | (b) Lanthanide |
| (3) Manganese | (c) Metal |
| (4) Cerium | (d) Transition metal |



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23. Match the columns:

| Column A | Column B |
|---------------------------|----------------|
| (1) Alkali metals | (a) Valency 4 |
| (2) Alkaline earth metals | (b) Valency 0 |
| (3) Argon | (c) Divalent |
| (4) Carbon | (d) Monovalent |



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24. Match the columns:

| Column A | Column B |
|--|-------------------|
| (1) Atomic size in a period from left to right | (a) Atomic mass |
| (2) Atomic size in a group from top to bottom | (b) Increases |
| (3) Modern Periodic Law | (c) Atomic number |
| (4) Mendeleev's Periodic Law | (d) Decreases |



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25. Match the columns:

| Column A | Column B |
|---------------------------|--------------|
| (1) Alkali metals | (a) Group 2 |
| (2) Alkaline earth metals | (b) Group 1 |
| (3) Halogens | (c) Group 18 |
| (4) Noble gases | (d) Group 17 |



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26. State whether the following statement is True' or False'. If false, write the correct statement for the same.

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



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27. State whether the following statement is 'True' or 'False'. If false, write the correct statement for the same.

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



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28. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Periods are the horizontal rows of elements



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29. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Group 17 elements are known as Noble gases



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30. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Silicon is a metalloid



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31. State whether the following statement is True' or False'. If false, write the correct

statement for the same.

As we move from left to right in a period of Moderns periodic table,atomic size of the elements gradually increases .



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32. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Group 1 elements in Modern periodic table are referred as"alkali metals"



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33. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Argon is not an inert gas.



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34. State whether the following statement is True' or False'. If false, write the correct statement for the same.

The d-block elements are called transition elements .



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35. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Upto calcium,the law of octaves was found to be applicable



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36. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Metals are electronegative and non-metals are electropositive .



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37. Eka-aluminium was discovered are and named as gallium(Ga)



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38. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Atomic number is the number of protons or electrons present in the nucleus .



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39. State whether the following statement is True' or False'. If false, write the correct

statement for the same.

Eka brom is known as germanium.



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40. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Tellurium, Polonium are metalloids



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41. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Isotopes have same atomic masses



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42. State whether the following statement is True' or False'. If false, write the correct statement for the same.

Isotopes have similar chemical properties .





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43. State whether the following statement is True' or False'. If false, write the correct statement for the same.

La stands for lutetium



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44. State whether the following statement is True' or False'. If false, write the correct

statement for the same.

F-block elements are metalloids



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45. State whether the following statement is True' or False'. If false, write the correct statement for the same.

In an atom of an element,extra-nuclear electrons take part in the chemical reaction



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46. The atom having the smallest size.



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47. The atom having the smallest atomic mass

.



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48. The most electronegative atom



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49. The noble gas with the smallest atomic radius



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50. The most reactive nonmetal



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51. The group with valency zero





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52. The family of non-metals having valency one .



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53. The family of metals having valency one .



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54. The family of metals having valency two



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55. The metalloids in the second and third periods



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56. Non-metals in the third period .



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57. Two elements having valency 4.



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58. Three elements having a single electron in their outermost shell .



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59. Three elements with filled outermost shell



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60. Three elements having 7 electrons in their outermost shell



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61. Three elements which are metalloids



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62. Three alkaline earth metals with electronic configuration



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63. Two pairs of Dobereiner's triad.



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



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



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66. The 3 elements which were predicted by Mendeleev for which the left blank spaces in the periodic table.



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67. Series of 14 elements placed below the periodic table having atomic no. from 58 to 71 (Ce to Lu)



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68. X, Y and Z are the elements of a Dobereiner's Triad. If the atomic mass X is 7 and that of Z is 39, what should be the atomic mass of Y?



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



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70. Identify Dobereiner's triads from the following group of elements having similar

chemical properties : `Mg(24.3),Ca(40.1),Sr(87.6)



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71. Identify dobereiner's traids from the following group of elements having similar chemical properties : `S(32.1),Se(79.0),T(127.6)



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72. Identify dobereiner's traids from the following group of elements having similar

chemical

properties

:

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



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73. State the laws/ Define

Newlands's Law of octaves:



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74. State the laws/ Define

Mendeleev's periodic law,



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75. State the laws/ Define

Moderns periodic Law,



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76. State the laws/ Define

Dobereiner's Traid



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77. State the laws/ Define

Periods are the horizontal rows of elements



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78. State the laws/ Define

Groups



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79. State the laws/ Define

Normal elements



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80. State the laws/ Define

Lanthanide Series



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81. State the laws/ Define

Actinde Series



Watch Video Solution

82. State the laws/ Define

Transition elements :d-block:: inner transition elements: _____



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83. State the laws/ Define

Inner Transition elements



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84. State the laws/ Define

Atomic radius of Lithium is ____pm.



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85. State the laws/ Define

Atomic radius



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86. State the laws/ Define

valency



Watch Video Solution

87. State the laws/ Define

Inert elements



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88. State the laws/ Define

Isotopes have same atomic masses



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89. State the laws/ Define

Metalloids



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90. What is the meant by periodicity ?



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91. How will the tendency to gain electrons change as we go from left to right across a

period ?why?



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



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



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



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95. Which is the incomplete period in the Moders periodic table?



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96. which law was modified into modern periodic law?



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97. what are periodic properties?



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98. What are normal elements?



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99. On what basis is potassium ($Z=19$) placed in 4^{th} period and group 1?



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



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101. What are types of matter?



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102. What are the types of elements ?



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103. What are the smallest particles of matter called?



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



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



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



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107. Write a short note on:

Mendeleev's periodic law



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



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109. Write a short note on:

Structure of the Modern periodic table



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110. Write a short note on:

Position of isotopes in the Mendeleev's and the
Modern periodic table



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111. Write a short note on:

Halogens or group 17 elements



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112. Write a short note on:

Transition elements.



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113. Write a short note on:

Inner Transition elements



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114. Write a short note on:

Metallic and Non-metallic properties



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115. Distinguish between:

Mendeleev's periodic table and Modern
periodic table



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116. Distinguish between:

Transition elements and Inner transition elements



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117. Distinguish between:

Insert gases and normal Elements



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118. Distinguish between:

Groups and periods of Modern periodic Table



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119. Distinguish between:

Metallic character and non-metallic character



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120. Distinguish between:

s-block elements and p-block elements



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121. Distinguish between:

Alkali metals and Alkaline earth metals



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



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123. Give scientific reasons :

Metallic character goes on decreasing while going from left to right in a period



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124. Give scientific reasons :

Atomic radius goes on increasing down a group



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125. Give scientific reasons :

Elements belonging to the same group have the same valency



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126. Give scientific reasons :

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



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127. Give scientific reasons :

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



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128. Give scientific reasons :

Alkali metals are placed in Group 1.



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129. Give scientific reasons :

Inert gases exist in the form of free atoms.



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130. Give scientific reasons :

Inert gases (zero group elements) are called noble gases.



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131. Give scientific reasons :

Fluorine is the most reactive in Group 17.



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132. Write down the electronic configuration of the following elements from the given atomic numbers. Answer the following question with explanation. ${}_3\text{Li}$, ${}_{14}\text{Si}$, ${}_{2}\text{He}$, ${}_{11}\text{Na}$, ${}_{15}\text{P}$. Which of these elements belong to period 3?



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133. Write down the electronic configuration of the following elements from the given

atomic numbers. Answer the following questions with explanation.

${}^1_1H, {}^7_7N, {}^{20}_{20}Ca, {}^{16}_{16}S, {}^4_4Be, {}^{18}_{18}Ar$. Which of these elements belong to the second group ?



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134. Write down the electronic configuration of the following elements from the given atomic numbers. Answer the following questions with explanation. ${}^7_7N, {}^6_6C, {}^8_8O, {}^5_5B,$

Al. which is the the most electronegative element among these?



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

"₄Be, ₆C, ₈O, ₅B, ₁₃Al. which is the most electropostive element among these ?



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

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



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

numbers. Answer the following questions with explanation. ${}_{19}\text{K}$, ${}_3\text{Li}$, ${}_{11}\text{Na}$, ${}_4\text{Be}$. Which of these atoms has smallest atomic radius?



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

${}_{13}\text{Al}$, ${}_{14}\text{Si}$, ${}_{11}\text{Na}$, ${}_{12}\text{Mg}$, ${}_{16}\text{S}$. Which of the

above elements has the highest metallic character?



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139. 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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140. Which element is a metal with valency 2?



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141. Which element is non-metal with valency 3?



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



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



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



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146. 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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147. Which of the above elements have the biggest and the smallest atom?



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



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



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



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



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152. 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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153. What would be the expected trend in the variation of non-metallic character of elements down a group?



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154. Go through the Modern periodic table (fig2.1) and write the names one below the other of the elements of group 1.



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155. Go through the Modern periodic table (fig2.1) and write the names one below the other of the elements of group 1. What similarity do you find in their electronic configuration?



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156. Go through the Modern periodic table (fig2.1) and write the names one below the other of the elements of group 1. How many valence electrons are there in each of these elements ?



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157. On going through the Modern periodic table (fig2.1) 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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158. 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. Is the number of valence electrons same for all these elements ?



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159. 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. Is the number of shells the same in these?



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160. How is the problem regarding the position of cobalt ("₅₉CO) and nickel ("_{NI})` in

Mendeleev's periodic table resolved in Modern periodic table ?



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161. How did the position of $\frac{35}{17}Cl$ and $\frac{37}{17}Cl$ get fixed in the Modern periodic table?



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162. Can there be an element with atomic mass 53 or 54 in between the two elements

,Chromium $\frac{52}{(24)Cr}$ and Manganese $\frac{55}{25}Mn$?



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163. How are isotopes of different elements placed in the Modern periodic Table?



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164. What should be the position of Hydrogen in the Modern periodic Table? Why?



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



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



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167. What was the basis of Mendeleev's classification ?



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168. What type of relationship of elements was examined by mendeleev?



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169. How many elements were known when Mendeleev started his work?



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170. What is meant by periodicity according to Mendeleev?



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171. What is Mendeleev's Periodic law?



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172. State the law on which modern periodic table is based



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173. How many groups are there in the modern periodic table?



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



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



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176. Which pair of elements do you think will have similar properties? : Sodium and potassium



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177. State the merits of Mendeleev's periodic table.



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



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179. Merits of Modern periodic table over Mendeleev's periodic table



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



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181. 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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182. Write the electronic configuration and valency of first 20 elements.



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183. 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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184. What is the periodic trend in the variation of valency while going down a group? Explain the



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185. Comparative study of all the four-blocks of Modern periodic table



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186. How could the modern periodic Table remove various anomalies of Mendeleev's table?



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187. Answer the question based on the given data

| Elements | K | Na | Rb | Cs | Li |
|--------------------|-----|-----|-----|-----|-----|
| Atomic radius (pm) | 231 | 186 | 244 | 262 | 152 |

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



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188. Answer the question based on the given data

| Elements | K | Na | Rb | Cs | Li |
|--------------------|-----|-----|-----|-----|-----|
| Atomic radius (pm) | 231 | 186 | 244 | 262 | 152 |

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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189. Answer the question based on the given data

| Elements | K | Na | Rb | Cs | Li |
|--------------------|-----|-----|-----|-----|-----|
| Atomic radius (pm) | 231 | 186 | 244 | 262 | 152 |

Which

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



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190. Answer the question based on the given data

| Elements | K | Na | Rb | Cs | Li |
|--------------------|-----|-----|-----|-----|-----|
| Atomic radius (pm) | 231 | 186 | 244 | 262 | 152 |

What is

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



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

| | | | | | | | |
|----|----|----|----|----|----|----|----|
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| P | | | | | T | | V |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Q | R | | S | | | U | |

Which

of these is an inert gas? Name it.



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

| | | | | | | | |
|----|----|----|----|----|----|----|----|
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| P | | | | | T | | V |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Q | R | | S | | | U | |

Which

of these is a halogen? Name it.



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

| | | | | | | | |
|----|----|----|----|----|----|----|----|
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| P | | | | | T | | V |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Q | R | | S | | | U | |

Which

of these are metals? Name them



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

| | | | | | | | |
|----|----|----|----|----|----|----|----|
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| P | | | | | T | | V |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Q | R | | S | | | U | |

If Q

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



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195. In the following table, seven elements P,Q,R,S,T,U and V (here letters are not the usual symbol of the elements)of the modern

periodic table with their atomic numbers are given

| | | | | | | | |
|----|----|----|----|----|----|----|----|
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| P | | | | | T | | V |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Q | R | | S | | | U | |

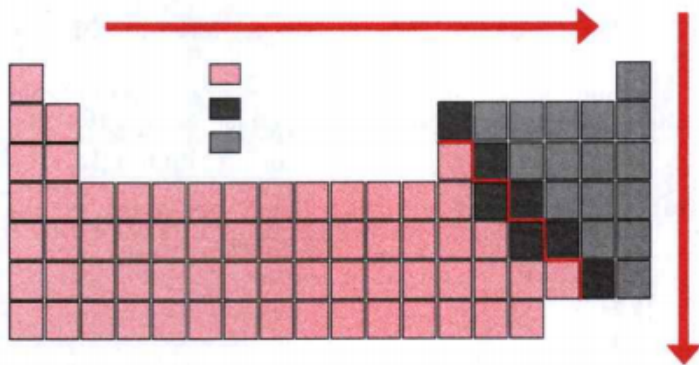
Write

the electronic configuration of R and T and the type of bond formed by their combination.



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196. Write the answers of the question with reference to the structure of the periodic table.



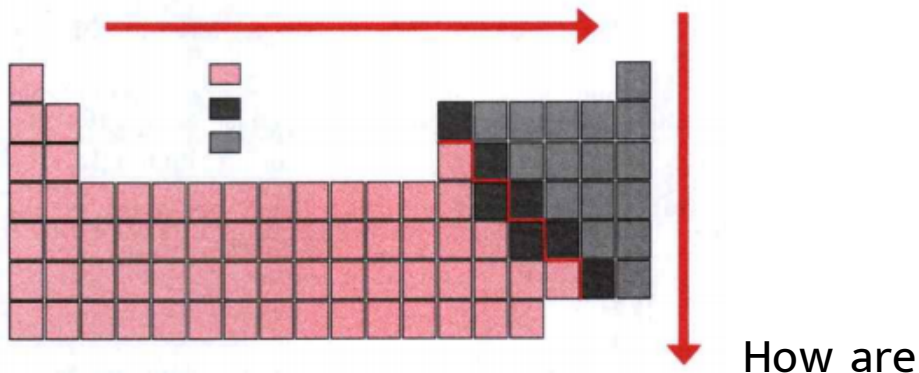
which

points are considered for the arrangement of the Modern period table?



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197. Write the answers of the question with reference to the structure of the periodic table.

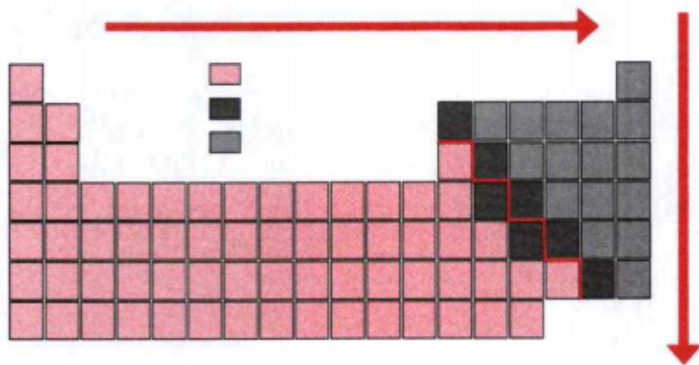


blocks indicated?



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198. Write the answers of the question with reference to the structure of the periodic table.



Which

elements are present near the zig zag line?

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

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

| | | | | | | | |
|---|---|---|----|----|----|----|----|
| | 1 | | | | | | 18 |
| 1 | | 2 | 13 | 14 | 15 | 16 | 17 |
| 2 | | P | | | Q | R | |
| 3 | | | | | S | | T |
| 4 | | | | | | | |

Write

the symbol of the element Q'.



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

| | | | | | | | | |
|---|---|---|----|----|----|----|----|----|
| | 1 | | | | | | | 18 |
| 1 | | 2 | 13 | 14 | 15 | 16 | 17 | |
| 2 | | P | | | Q | R | | |
| 3 | | | | | | S | | T |
| 4 | | | | | | | | |

Will

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



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

| | | | | | | | | |
|---|---|---|----|----|----|----|----|----|
| | 1 | | | | | | | 18 |
| 1 | | 2 | 13 | 14 | 15 | 16 | 17 | |
| 2 | | P | | | Q | R | | |
| 3 | | | | | | S | | T |
| 4 | | | | | | | | |

Arrange

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



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

| | | | | | | | | |
|---|---|---|----|----|----|----|----|----|
| | 1 | | | | | | | 18 |
| 1 | | 2 | 13 | 14 | 15 | 16 | 17 | |
| 2 | | P | | | Q | R | | |
| 3 | | | | | | S | | T |
| 4 | | | | | | | | |

What is

the number of electrons in L shell of element

T?



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

| | | | | | | | |
|---|---|---|----|----|----|----|----|
| | 1 | | | | | | 18 |
| 1 | | 2 | 13 | 14 | 15 | 16 | 17 |
| 2 | | P | | | Q | R | |
| 3 | | | | | S | | T |
| 4 | | | | | | | |

Name

any two elements that will have properties similar to that of element 'P'



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205. Study the below given periodic table in which four elements are indicated by alphabets A,B,C and D

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|--|
| 1 | | | | | | | | | | | 18 | | | | | |
| 2 | | | | | | | | | | | 13 | 14 | 15 | 16 | 17 | |
| A | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | B | C | D | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

Which

element is a metalloid? Name this element and also mention the metalloids in modern periodic table



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206. Study the below given periodic table in which four elements are indicated by alphabets A,B,C and D

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|--|----|----|----|----|----|--|
| 1 | | | | | | | | | | | | | | | | | 18 | |
| | 2 | | | | | | | | | | | | 13 | 14 | 15 | 16 | 17 | |
| A | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | B | C | D | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

Among

'A' and 'C' which element has larger atomic radius?why?



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207. Study the below given periodic table in which four elements are indicated by alphabets A,B,C and D

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|--|---|---|---|--|--|----|
| 1 | | | | | | | | | | | | | | | | | | 18 |
| | 2 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| A | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | B | C | D | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

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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208. A scientist 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 and 2 and group 17
what is the valency of magnesium?



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209. A scientist 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 and 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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210. A scientist 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 and 2 and group 17

Name the element in group 17 which belongs to the same period as sodium.



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211. A scientist 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 and 2 and group 17

Write the formula of compound formed in the reaction between lithium and bromine.



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212. A scientist 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 and 2 and group 17 write the formula of compound formed in the reaction between calcium and fluorine.



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