



CHEMISTRY

BOOKS - EVERGREEN CHEMISTRY (ENGLISH)

PERIODIC PROPERTIES AND VARIATIONS OF PROPERTIES (PHYSICAL AND CHEMICAL)

Questions

1. Why atomic number is more fundamental than any other quantity ?



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2. An element X has four shells and 3 valence electrons. Assign group no. and period no. to it.



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3. Why is Na^+ cation smaller than the parent atom Na ?



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4. Why is anion larger than its parent atom ?



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5. Which will have greater electron affinity
Oxygen or Fluorine ?



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6. Comment on the electron affinities of noble gases.



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7. Calculate electronegativity difference between NaCl.



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8. From the values of electronegativities how can conclude about the nature of bond formed?



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Worksheet 1 Fill In The Blanks With Suitable Words

1. Newland law of octave arranged elements in increasing order of (atomic masses/ atomic number).

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2. Dobereiner arranged similar atoms in a group of (three/four).

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3. Position of (hydrogen / helium) is controversial in Mendeleev's periodic table.

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4. If an electron (lose / gain) energy it jumps to lower energy level from higher energy level.



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5. Fifth period contains elements (18 / 32).



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6. (sixth / seventh) period is the longest period of the present periodic table.



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7. Beryllium exhibits diagonal relationship with (magnesium / aluminium).



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8. Inner transition elements comprise of (d/f) block.



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9. (Mendeleev / Moseley) left gaps in the periodic table for the undiscovered elements.



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10. Modern periodic table was given by (Moseley / Mendeleev).



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Worksheet 1 Write Short Answer For The Following

1. Why was Newland's law rejected ?



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2. Why did Mendeleev left gaps in his periodic table ?



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3. Name the light element having three isotopes.



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4. Define atomic weight.



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5. What do you understand by chemically similar elements ?



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Worksheet 1 Give One Word For The Following

1. Vertical columns of periodic table are known as



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2. Horizontal rows of periodic table are called



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3. Maximum number of electrons in the M shell



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4. Scientist who grouped elements in triad



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5. Group of elements which are kept at the bottom of periodic table.



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6. Inert gas present in the second period



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7. Element present in the beginning of periodic table



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8. Lithium exhibits diagonal relationship with



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9. Number of elements present in longest period



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10. Number of elements present in the shortest period.



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Worksheet 2 Fill In The Blanks With Suitable Words

1. Atomic radii (increases / decreases) along the period and

(increases / decreases) down the group.



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2. The atomic radii of inert gases are larger than those of preceding elements due to (force of repulsion / high I.E.) in completely filled shells.



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3. The minimum amount of energy required to remove the most loosely bound electron from an isolated, neutral gaseous atom is known as (I.E/E.A).



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4. (Hydrogen / Helium) has the highest ionisation energy in the periodic table.



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5. Noble gases have (zero / highest) electron affinity.



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6. Chlorine has (more / less) electron affinity than fluorine.



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7. The tendency of an atom to attract shared pair of electrons to itself when combined in a compound is called (electronegativity / electron affinity).



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8. Electronegativity (increases / decreases) down the group and (increases / decreases) along the period.



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9. Anion is (larger / smaller) than the parent atom where as cation is (larger / smaller) than the parent atom.



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10. Hydrogen chloride is a (pure covalent compound / polar covalent compound).



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Worksheet 2

1										2							
3	4							5	6	7	8	9	10				
11	12							13	14	15	16	17	18				
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
K							Fe										

1.

The table shows a part of the periodic table, with some elements in their position. Answer the following questions:

Give the atomic numbers of two elements, which are inert in nature.



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1										2							
3	4								5	6	7	8	9	10			
11	12								13	14	15	16	17	18			
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
K						Fe											

6.

The table shows a part of the periodic table, with some elements in their position. Answer the following questions:

Name two more elements in group 2.



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Ne, Ar, He, Xe

(Increasing order of

atomic size)



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9. Arrange the following according to the given trend.

F, Cl, Br, I

(Increasing order of

atomic size)



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10. Arrange the following according to the given trend.

Na, Al, Mg, P

(Increasing order of

atomic size)



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11. Arrange the following according to the given trend.

Na, K, Rb, Cs

(Increasing order

of atomic size)





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12. Arrange the following according to the given trend.

F, Cl, O, N, S

(Increasing order

of atomic size)



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Worksheet 3

1. Complete the given table :

Li				
Na				
K				
Rb				
Cs				
Fr				
	Size	Valence electrons	REACTIVITY	I.E.



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2. Match the following elements of column I with their property given in column II.

Column I

1. Chlorine
2. Fluorine
3. Bromine
4. Iodine
5. Astatine

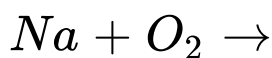
Column II

- (a) Solid halogen
- (b) Radioactive
- (c) Reddish brown liquid
- (d) Highest electron affinity
- (e) Most electronegative



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3. Complete the following equations :



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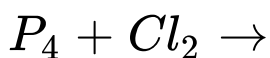
4. Complete the following equations :





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5. Complete the following equations :



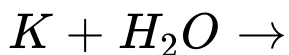
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6. Complete the following equations :



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7. Complete the following equations :



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Worksheet 3 Fill In The Blanks With Suitable Words

1. (Cesium / Francium) is liquid at room temperature.



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2. Size of atoms of alkali metals is the
(largest / smallest) in its period.



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3. Density of alkali metals (decreases /
increases) with atomic number.



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4. Halogens are (good / bad) conductors of heat and electricity.



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5. Boiling point and melting point of alkali metals (increase / decrease) with increase in atomic number.



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1. The yellowish gas among the following is

A. Fluorine

B. Chlorine

C. Bromine

D. Iodine

Answer:



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2. Which of the following is a covalent chloride

A. Sodium Chloride

B. Potassium Chloride

C. Magnesium Chloride

D. Phosphorus Chloride

Answer:



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3. To decrease the chemical reactivity, alkali metals are converted to

- A. Oxides
- B. Chlorides
- C. Amalgams
- D. Nitrates

Answer:



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4. The colour of alkali halides is

A. White

B. Red

C. Yellow

D. None of these

Answer:



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5. Atoms of which elements have their outer layers occupied by seven electrons.

A. Alkali metals

B. Inert gases

C. Halogens

D. Alkaline earth metals

Answer:



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Additional Questions For Practice Very Short Answer Questions

1. Name or state with reference to the elements of the modern periodic table.

The number of electron shells in elements of period 3.



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2. Name the element with reference to the elements of the modern periodic table.

The noble gas having an electronic configuration of 2, 8, 8.



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3. Name the element with reference to the elements of the modern periodic table.

The group whose elements show zero valency.



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4. Name the element with reference to the elements of the modern periodic table.

The non-metal in the period 3 having a valency of 1.



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5. Name the element with reference to the elements of the modern periodic table.

The alkali metal in the period 2.



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6. Name the element with reference to the elements of the modern periodic table.

The element in the period 3 which does not form an oxide.



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7. Name the element with reference to the elements of the modern periodic table.

The element having maximum metallic character in period 2.



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8. Name the element with reference to the elements of the modern periodic table.

The element having largest atomic size in periods.



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9. Name the element with reference to the elements of the modern periodic table.

The more non-metallic element from the elements S, P, Cl and Ar.



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10. Name the element with reference to the elements of the modern periodic table.

The noble gas having duplet arrangement of electrons.



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11. Name the element with reference to the elements of the modern periodic table.

A light element of period 3 with a neutron / proton ratio of about 1.



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Additional Questions For Practice Short Answer Questions

1. Define group and period.



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2. How many groups and periods are present in the modern periodic table ?



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3. State the fundamental property on which the modern periodic table or long form of periodic table is based.



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4. What are 'Periods'? State the correlation of a period number with the elements of that period.



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5. Explain the trend in general of ionisation potential of elements on moving from left to right across a period



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6. Explain the trend in general of ionisation potential of elements :

on moving down a group. Give reasons for the change in the periodic trend in each case.



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7. An element has 5 valence electrons and three shells what is the atomic number



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8. An element has 5 valence electrons and three shells what is the group number



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9. State the property trends in general on moving from left to right in a period of the periodic table.



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10. What are bridge and typical elements in the modern periodic table ?



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Additional Questions For Practice Fill In The Blanks With The Suitable Words In Each Case

1. Elements at the extreme left of the modern periodic table are reactive, while elements on the extreme right (group 18)reactive (most/ un).



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2. The element in group VIIA which is a liquid at room temperature is (F, Br, I).



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3. Atomic size of neon is (more/less) than the atomic size of fluorine.



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4. Increase in nuclear charge of an atom (decreases/increases) the tendency of the atom to lose electrons.



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5. If combining atoms of a compound have nearly similar electronegativities the bond between them is (electrovalent/covalent).



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6. An atom is said to be a non-metal if it.....
(gains/loses) one or more electrons.



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7. Element 'X' in period 3 has high electron affinity and electronegativity. It is likely to be a (metal/non-metal).



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8. Element Z in sub-group IIA is below element 'Y' in the same sub-group. The element 'Z' will be expected to have (higher/lower) atomic size and (more/less) metallic character than 'Y'.



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9. Argon in period 3 is likely to have a (larger/smaller) atomic size than chlorine and

its electron affinity value would be
(lesser/ zero) compared to chlorine.



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10. Across a period the valence electrons
(increase/decrease) while down a group they
..... (remain same/increase by 1).



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**Additional Questions For Practice Give Reason
For The Following**

1. Explain why Ionisation potential increases with increase in nuclear charge of the elements.



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2. Electron affinity of noble gas elements is zero.Explain.



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3. Phosphorus, sulphur and chlorine are electronegative elements of the periodic table. Give Reasons.



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4. Atomic size increases down a group of the periodic table. Explain.



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5. A decrease in ionisation potential of an element leads to a decrease in non-metallic character of the element. Explain.



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Additional Questions For Practice Arrange The Following Elements As Indicated In Brackets

1. He, Ar, Ne (increasing order of number of electron shells)



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2. Na, K, Li (Increasing atomic size)



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3. F, Cl, Br (Increasing electron affinity)



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4. F, Cl, Br (Increasing electronegativity)



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5. Na, Li, K (Increasing order of ionisation energy) is....



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6. Na, K, Li (Increasing order for metallic character) is.....



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Questions From Previous Icse Board Papers 2005

1. To changes in the properties of elements on moving from left to right across a period of the Periodic Table. For each property, change the letter corresponding to the correct answer from the choices.

The non-metallic character of the elements :

A. decreases

B. increases

C. remains the same

D. depends on the period

Answer:



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2. To changes in the properties of elements on moving from left to right across a period of the Periodic Table. For each property, change the letter corresponding to the correct answer from the choices.

The electronegativity:

A. depends on the number of valence electrons

B. remains the same

C. decreases

D. increases

Answer:



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3. To changes in the properties of elements on moving from left to right across a period of the Periodic Table. For each property, change the letter corresponding to the correct answer from the choices.

The ionization potential :

A. goes up and down

B. decreases

C. increases

D. remains the same

Answer:



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4. To changes in the properties of elements on moving from left to right across a period of the Periodic Table. For each property, change the letter corresponding to the correct answer from the choices.

The atomic size :

A. decreases

B. increases

C. remains the same

D. sometimes increases and sometimes
decreases

Answer:



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5. To changes in the properties of elements on moving from left to right across a period of the Periodic Table. For each property, change

the letter corresponding to the correct answer from the choices.

The electron affinity of the elements in groups 1 to 7:

- A. goes up and then down
- B. decreases and then increases
- C. increases
- D. decreases

Answer:



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Questions From Previous Icse Board Papers 2006

1. The elements of one short period of the Periodic Table are given below in the order from left to right:

Li Be B C O F Ne

To which period do these elements belong?



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2. The elements of one short period of the Periodic Table are given below in the order from left to right:

Li Be B C O F Ne

One element of this period is missing. Which is the missing element and where should it be placed ?



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3. The elements of one short period of the Periodic Table are given below in the order from left to right:

Li Be B C O F Ne

Which one of the elements in this period shows the property of catenation ?



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4. The elements of one short period of the Periodic Table are given below in the order

from left to right:

Li Be B C O F Ne

Place the three elements fluorine, beryllium and nitrogen in the order of increasing electronegativity.



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5. The elements of one short period of the Periodic Table are given below in the order from left to right:

Li Be B C O F Ne

Which one of the above elements belongs to the halogen series?



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Questions From Previous Icse Board Papers 2007

1. A group of elements in the Periodic Table are given below (Boron is the first member of the group and Thallium is the last).

Boron

Aluminium

Gallium

Indium

Thallium

Answer the following questions in relation to the above group of elements :

Which element has the most metallic character ?



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2. A group of elements in the Periodic Table are given below (Boron is the first member of

the group and Thallium is the last).

Boron

Aluminium

Gallium

Indium

Thallium

Answer the following questions in relation to the above group of elements :

Which element would be expected to have the highest electronegativity ?



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3. A group of elements in the Periodic Table are given below (Boron is the first member of the group and Thallium is the last).

Boron

Aluminium

Gallium

Indium

Thallium

Answer the following questions in relation to the above group of elements :

If the electronic configuration of Aluminium is 2, 8, 3, how many electrons are there in the outer shell of Thallium ?



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4. A group of elements in the Periodic Table are given below (Boron is the first member of the group and Thallium is the last).

Boron

Aluminium

Gallium

Indium

Thallium

Answer the following questions in relation to the above group of elements :

The atomic number of Boron is 5. Write the chemical formula of the compound formed when Boron reacts with Chlorine.



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5. A group of elements in the Periodic Table are given below (Boron is the first member of the group and Thallium is the last).

Boron

Aluminium

Gallium

Indium

Thallium

Answer the following questions in relation to the above group of elements :

Will the elements in the group to the right of this Boron group be more metallic or less metallic in character ? Justify your answer.



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Questions From Previous Icse Board Papers 2008

1. With reference to the variation of properties in the Periodic Table, which of the following is generally true ?

A. Atomic size increases from left to right across a period.

B. Ionization potential increases from left to right across a period.

C. Electron affinity increases going down a group.

D. Electronegativity increases going down a group.

Answer:



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2. The following questions refer to the Periodic

Table :

Name the first and last element in period-2.



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3. The following questions refer to the Periodic Table :

What happens to the atomic size of elements moving from top to bottom of a group.



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4. The following questions refer to the Periodic Table :

Which of the elements has the greatest electron affinity among the halogens ?





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5. The following questions refer to the Periodic Table :

What is the common feature of the electronic configurations of the elements in group 17 ?



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6. Supply the missing word from those in the brackets not write out the sentence ?

If an element has a low ionization energy then it is likely to be (metallic/non-metallic).



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7. Supply the missing word from those in the brackets not write out the sentence ?

If an element has seven electrons in its outermost shell then it is likely to have the (largest/ smallest atomic size among all the elements in the same period).



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8. The metals of group-2 from top to bottom are Be, Mg, Ca, Sr, Ba. Which of these metals will form ions most readily and why?



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9. What property of an element is measured by electronegativity.



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Questions From Previous Icse Board Papers 2009

1. Among Period-2 elements - Lithium, Carbon, Fluorine, Neon-State the one which has high electron affinity.

A. Lithium

B. Carbon

C. Fluorine

D. Neon

Answer:



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2. Consider the section of the periodic table given below.

Group numbers	IA	IIA	IIIA	IVA	VA	VI A	VIIA	0
	1	2	13	14	15	16	17	18
	Li		F			O	J	Ne
	A	Mg	E	Si		H	K	
	B	C		F	G			L

Note : In this table B does not represent boron

C does not represent carbon

F does not represent fluorine

H does not represent hydrogen

K does not represent potassium

You must see the position of the element in the periodic table.

Some elements are given in their own symbol and position in the periodic table, while others are shown with a letter. With reference to the table:

Which is the most electronegative ?



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3. Consider the section of the periodic table given below.

Group numbers	IA	IIA	IIIA	IVA	VA	VIA	VIIA	0
	1	2	13	14	15	16	17	18
	Li		F			O	J	Ne
	A	Mg	E	Si		H	K	
	B	C		F	G			L

Note : In this table B does not represent boron

C does not represent carbon

F does not represent fluorine

H does not represent hydrogen

K does not represent potassium

You must see the position of the element in the periodic table.

Some elements are given in their own symbol and position in the periodic table, while others are shown with a letter. With reference to the table:

How many valence electrons are present in G?



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4. Consider the section of the periodic table given below.

Group numbers	IA	IIA	IIIA	IVA	VA	VI A	VIIA	0
	1	2	13	14	15	16	17	18
	Li		F			O	J	Ne
	A	Mg	E	Si		H	K	
	B	C		F	G			L

Note : In this table B does not represent boron

C does not represent carbon

F does not represent fluorine

H does not represent hydrogen

K does not represent potassium

You must see the position of the element in the periodic table.

Some elements are given in their own symbol

and position in the periodic table, while others are shown with a letter. With reference to the table:

Write the formula of the compound between B and H.



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5. Consider the section of the periodic table given below.

Group numbers	IA	IIA	IIIA	IVA	VA	VI A	VIIA	0
	1	2	13	14	15	16	17	18
	Li		F			O	J	Ne
	A	Mg	E	Si		H	K	
	B	C		F	G			L

Note : In this table B does not represent boron

C does not represent carbon

F does not represent fluorine

H does not represent hydrogen

K does not represent potassium

You must see the position of the element in the periodic table.

Some elements are given in their own symbol

and position in the periodic table, while others are shown with a letter. With reference to the table:

In the compound between F and J, what type of bond will be formed ?



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6. Consider the section of the periodic table given below.

Group numbers	IA	IIA	IIIA	IVA	VA	VIA	VIIA	0
	1	2	13	14	15	16	17	18
	Li		F			O	J	Ne
	A	Mg	E	Si		H	K	
	B	C		F	G			L

Note : In this table B does not represent boron

C does not represent carbon

F does not represent fluorine

H does not represent hydrogen

K does not represent potassium

You must see the position of the element in the periodic table.

Some elements are given in their own symbol

and position in the periodic table, while others are shown with a letter. With reference to the table:

Draw the electron dot structure for the compound formed between C and K.



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7. Define the following term : Ionization potential.



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Questions From Previous Icse Board Papers 2010

1. The number of electrons present in the valence shell of a halogen is :

A. 1

B. 3

C. 5

D. 7

Answer:



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2. An element has an atomic number 16. State the period to which it belongs.



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3. An element has an atomic number 16. State the number of valence electrons.



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4. An element has an atomic number 16. State whether it is a metal or non-metal.



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Questions From Previous Icse Board Papers 2011

1. Fill in the blanks from the choices given below:

Across a period, the ionization potential
(increases, decreases, remains same).



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2. Fill in the blanks from the choices given below:

Down the group, electron affinity
(increases, decreases, remains same).



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3. Choose the correct answer from the options given below :

In the periodic table alkali metals are placed in the group.

A. 1

B. 11

C. 17

D. 18

Answer:



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4. Choose the correct answer from the options given below :

Which of the following properties do not match with elements of the halogen family?

- A. They have seven electrons in their valence shell.
- B. They are highly reactive chemically.
- C. They are metallic in nature.
- D. They are diatomic in their molecular form.

Answer:



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5. Give the number of group and the period, of the element having three shells with three electrons in valence shells.



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Questions From Previous Icse Board Papers 2012

1. An element in period 3 whose electron affinity is zero.

A. Neon

B. Sulphur

C. Sodium

D. Argon

Answer:



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2. Choose the correct answer from the options given below:

An alkaline earth metal.

A. Potassium

B. Calcium

C. Lead

D. Copper

Answer:



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3. Give reasons for the following:

Ionisation potential of the element increases across a period.



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4. Give reasons for the following:

Alkali metals are good reducing agents.



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5. Name the following metal :

A metal present in period 3 group 1 of the periodic table.



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6. There are three elements E, F, G with atomic numbers 19, 8 and 17 respectively.

Classify the elements as metals and non metals.



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7. There are three elements E, F, G with atomic numbers 19, 8 and 17 respectively.

Give the molecular formula of the compound formed between E and G and state the type of chemical bond in this compound.



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Questions From Previous Icse Board Papers 2013

1. Choose the most appropriate answer from the following options :

Among the period 2 elements, the element which has high electron affinity is :

A. Lithium

B. Carbon

C. Chlorine

D. Fluorine

Answer:



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Group	IA	IIA	IIIA	IVA	VA	VIA	VIIA	0
number	1	2	13	14	15	16	17	18
2 nd period	Li		D			O	J	Ne
	A	Mg	E	Si		H	M	
	R	T	I		Q	u		y

2.

- In this table H does not represent hydrogen.
- Some elements are given in their own symbol and position in the periodic table.
- While others are shown with a letter.

With reference to the table answer the following questions :

Identify the most electronegative element.



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Group	IA	IIA	IIIA	IVA	VA	VIA	VIIA	0
number	1	2	13	14	15	16	17	18
2 nd period	Li		D			O	J	Ne
	A	Mg	E	Si		H	M	
	R	T	I		Q	u		y

3.

- In this table H does not represent hydrogen.
- Some elements are given in their own symbol and position in the periodic table.
- While others are shown with a letter.

With reference to the table answer the following questions :

Identify the most reactive element of group 1.



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Group	IA	IIA	IIIA	IVA	VA	VIA	VIIA	0
number	1	2	13	14	15	16	17	18
2 nd period	Li		D			O	J	Ne
	A	Mg	E	Si		H	M	
	R	T	I		Q	u		y

4.

- In this table H does not represent hydrogen.
- Some elements are given in their own symbol and position in the periodic table.
- While others are shown with a letter.

With reference to the table answer the following questions :

Identify the element from period 3 with least atomic size.



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Group	IA	IIA	IIIA	IVA	VA	VIA	VIIA	0
number	1	2	13	14	15	16	17	18
2 nd period	Li		D			O	J	Ne
	A	Mg	E	Si		H	M	
	R	T	I		Q	u		y

5.

- In this table H does not represent hydrogen.
- Some elements are given in their own symbol and position in the periodic table.
- While others are shown with a letter.

With reference to the table answer the following questions :

How many valence electrons are present in Q?



Group	IA	IIA	IIIA	IVA	VA	VIA	VIIA	0
number	1	2	13	14	15	16	17	18
2 nd period	Li		D			O	J	Ne
	A	Mg	E	Si		H	M	
	R	T	I		Q	u		y

6.

- In this table H does not represent hydrogen.
- Some elements are given in their own symbol and position in the periodic table.
- While others are shown with a letter.

With reference to the table answer the following questions :

Which element from group 2 would have the least ionization energy?



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Group	IA	IIA	IIIA	IVA	VA	VIA	VIIA	0
number	1	2	13	14	15	16	17	18
2 nd period	Li		D			O	J	Ne
	A	Mg	E	Si		H	M	
	R	T	I		Q	u		y

- 7.
- In this table H does not represent hydrogen.
 - Some elements are given in their own symbol and position in the periodic table.
 - While others are shown with a letter.

With reference to the table answer the

following questions :

Identify the noble gas of the fourth period.



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Group	IA	IIA	IIIA	IVA	VA	VIA	VIIA	0
number	1	2	13	14	15	16	17	18
2 nd period	Li		D			O	J	Ne
	A	Mg	E	Si		H	M	
	R	T	I		Q	u		y

8.

- In this table H does not represent hydrogen.
- Some elements are given in their own symbol and position in the periodic table.
- While others are shown with a letter.

With reference to the table answer the

following questions :

In the compound between A and H what type of bond would be formed and give the molecular formula for the same.



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9. Identify: The element which has the highest ionization potential.



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Questions From Previous Icse Board Papers 2014

1. Choose the correct answer from the options given below :

Ionisation Potential increases over a period from left to right because the :

A. Atomic radius increases and nuclear charge increases

B. Atomic radius decreases and nuclear charge decreases

C. Atomic radius increases and nuclear charge decreases

D. Atomic radius decreases and nuclear charge increases

Answer:



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2. Choose the correct answer from the options given below :

If an element A belongs to Period 3 and Group

II, then it will have :

A. 3 shells and 2 valence electrons

B. 2 shells and 3 valence electrons

C. 3 shells and 3 valence electrons

D. 2 shells and 2 valence electrons

Answer:



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3. The amount of energy released when an atom in the gaseous state accepts an electron to form an anion.



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4. An element Z has atomic number 16. Answer the following questions on Z:

State the period and group to which z belongs.



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5. An element Z has atomic number 16. Answer the following questions on Z:

Is Z a metal or a non-metal ?



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6. An element Z has atomic number 16. Answer the following questions on Z:

State the formula between Z and Hydrogen.



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7. An element Z has atomic number 16. Answer the following questions on Z:

What kind of a compound is this?



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Questions From Previous Icse Board Papers 2015

1. Choose the most appropriate answer for each of the following:

Among the elements given below, the element with the least electronegativity is :

A. Lithium

B. Carbon

C. Boron

D. Fluorine

Answer:



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2. Answer the following questions:

The metals of Group 2 from top to bottom are Be, Mg, Ca, Sr, and Ba.

Which one of these elements will form ions most readily and why?



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3. Answer the following questions:

The metals of Group 2 from top to bottom are Be, Mg, Ca, Sr, and Ba.

State the common feature in the electronic configuration of all these elements.



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4. Arrange the following as per the instructions given in the brackets :

Cs, Na, Li, K, Rb (increasing order of metallic character).



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5. Arrange the following as per the instructions given in the brackets :

Mg, Cl, Na, S, Si (decreasing order of atomic size).



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6. Arrange the following as per the instructions given in the brackets :

Na, K, Cl, S, Si (increasing order of ionization energy).





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7. Arrange the following as per instructions given in the brackets:

Cl, F, Br, I (increasing order of electron affinity)



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Questions From Previous Icse Board Papers 2016

1. Electrovalent compounds have
(high/low) melting points.



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2. The tendency of an atom to attract electrons to itself when combined in a compound..... .



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3. The electrons present in the outermost shell of an atom



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4. Rewrite the following sentences by using the correct symbol $>$ (greater than) or $<$ (less than) in the blanks given :

The ionization potential of Potassium is that of Sodium.



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5. Rewrite the following sentences by using the correct symbol $>$ (greater than) or $<$ (less than) in the blanks given :

The electronegativity of Iodine is that of Chlorine.



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6. Use the letters only written in the Periodic Table given below to answer the questions that follow :

	I	II	GROUPS										III	IV	V	VI	VII	0
1																	L	
2	Q												E	G	J	Z	M	
3	R																	
4	T																	
5																		

State the number of valence electrons in atom J.



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7. Use the letters only written in the Periodic Table given below to answer the questions that follow :

	I	II	GROUPS										III	IV	V	VI	VII	0
1																	L	
2	Q												E	G	J	Z	M	
3	R																	
4	T																	
5																		

Which element shown forms ions with a single negative charge ?



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8. Use the letters only written in the Periodic Table given below to answer the questions that follow :

	I	II	GROUPS										III	IV	V	VI	VII	0
1																	L	
2	Q													E	G	J	Z	M
3	R																	
4	T																	
5																		

Which metallic element is more reactive than R?



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9. Use the letters only written in the Periodic Table given below to answer the questions that follow :

	I	II	GROUPS										III	IV	V	VI	VII	0				
1																		L				
2	Q																	E	G	J	Z	M
3	R																					
4	T																					
5																						

Which element has its electrons arranged in four shells ?



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10. Fill in the blanks by selecting the correct word from brackets :

If an element has a low ionization energy then it is likely to be (metallic / non metallic).



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11. Fill in the blanks by selecting the correct word from brackets :

If an element has seven electrons in its outermost shell then it is likely to have the

..... (largest/ smallest) atomic size among all the elements in the same period.



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Questions From Previous Icse Board Papers 2017

1. Fill in the blank from the choices given in brackets :

The energy required to remove an electron from a neutral isolated gaseous atom and convert it into a positively charged gaseous

ion is called (electron affinity, ionisation potential, electronegativity)



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2. Match the atomic number 2, 4, 8, 15, and 19 with of the following:

A solid non-metal belonging to the third period.



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3. Match the atomic number 2, 4, 8, 15, and 19

with of the following:

A metal of valency 1.



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4. Match the atomic number 2, 4, 8, 15 and 19

with the following:

A gaseous element with valency 2.



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5. Match the atomic number 2, 4, 8, 15, and 19 with of the following:

An element belonging to Group 2.



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6. Match the atomic number 2, 4, 8, 15, and 19 with of the following:

A rare gas.



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7. Arrange the following as per the instruction given in the brackets:

He, Ar, Ne (Increasing order of the number of electron shells)



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8. Arrange the following as per the instruction given in the brackets:

Na, Li, K (Increasing Ionisation Energy)



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9. F, Cl, Br (Increasing electronegativity)



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10. Arrange the following as per the instruction given in the brackets:

Na, K, Li (Increasing atomic size)



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11. State the type of Bonding in the following molecules:

(i) Water (ii) Calcium oxide



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Questions From Previous Icse Board Papers 2018

1. Give one word or a phrase for the following statement:

The energy released when an electron is

added to a neutral gaseous isolated atom to form a negatively charged ion.



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2. Give a reason for the following:

Ionisation potential increases across a period, from left to right.



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3. In Period 3 of the Periodic Table, element B is placed to the left of element A.

On the basis of this information, choose the correct word from the brackets to complete the following statements :

The element B would have (lower/higher) metallic character than A.



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4. In Period 3 of the Periodic Table, element B is placed to the left of element A. On the basis of this information, choose the correct word from the brackets - to complete the following statements.

The element A would probably have [lesser/higher] electron affinity than B.



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5. In Period 3 of the Periodic Table, element B is placed to the left of element A.

On the basis of this information, choose the correct word from the brackets to complete the following statements :

The element A would have (greater/smaller) atomic size than B.



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