



CHEMISTRY

BOOKS - FULL MARKS CHEMISTRY (TAMIL ENGLISH)

CHEMICAL BONDING

Exercise I Choose The Correct Answer

1. Number of valence electrons in carbon is

A. 2

B. 4

C. 3

D. 5

Answer: D



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2. Sodium having atomic number 11, ready toelectron/electrons to attain the nearest Noble gas electronic configuration.

A. gain one

B. gain two

C. lose one

D. lose two

Answer: C



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3. The element that would form anion by gaining electrons in a chemical reaction is

A. Potassium

B. Calcium

C. Fluorine

D. Iron

Answer: C



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4. Bond formed between a metal and non metal atom is usually

- (a) Ionic bond
- (b) covalent bond
- (c) coordinate bond

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5.compounds have high melting and boiling points

- (a) Covalent (b) Coordinate (c) Ionic

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6. Covalent bond is formed by
transfer of electrons (b) sharing of electrons (c) sharing a
pair of electrons

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7. Oxidising agents are also called asbecause they
remove electrons from other substances.

(a) electron donors (b) electron acceptors.

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8. Elements with stable electronic configurations have eight
electrons in their valence shell. They are.....

A. halogens

B. metals

C. noble gases

D. non metals

Answer: C

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Exercise II Answer In Brief

1. How do atoms attain Noble gas electronic configuration?

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2. NaCl is insoluble in carbon tetrachloride but soluble in water. Give reason.

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3. Explain Octet rule with an example.

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4. Write a note on different types of bonds.

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5. Correct the wrong statements.

a. Ionic compounds dissolve in non polar solvents

b. Covalent compounds conduct electricity in molten or solution state

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6. Complete the table given below.

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7. Draw the electron distribution diagram for the formation of Carbon dioxide (CO_2) molecule

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8. Fill in the following table according to the type of bonds formed in the given molecule

$CaCl_2$, H_2O , CaO , CO , KBr , HCl , CCl_4 , HF , CO_2 , Al_2Cl_6

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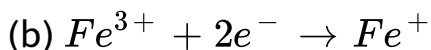
9. Choose the correct answer from the choices given below.

The property which is characteristic of an ionic compound is that

- a. it often exists as gas at room temperature
- b. it is hard and brittle
- c. it undergoes molecular reactions
- d. It has low melting point

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10. Identify the following reactions as oxidation or reduction



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11. Identify the compounds as Ionic Covalent/Coordinate based on the given characteristics.

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12. An atom X with atomic number 20 combines with atom Y with atomic numbers 8. Draw the dot structure for the formation of the molecule XY.

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13. Considering $MgCl_2$ as ionic compound as ionic compound and CH_4 a covalent compound give any two difference between these two compounds

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14. Why are Noble gases inert in nature?

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Exercise Iii Answer In Detail

1. List down the differences between Ionic and Covalent compounds

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2. Give an example for each of the following statements.

a. a compound in which two Covalent bonds are formed

b. a compound in which one Ionic bond is formed

c. a compound in which two Covalent and one Coordinate bonds are formed

d. a compound in which three covalent bonds are formed.

e. a compound in which Coordinate bond is formed



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3. Identify the incorrect statement and correct them.

a. Like covalent compounds, Coordinate compounds also contain charged particles (ions), so they are good conductors of electricity

b. Tonic bond is a weak bond when compared to Hydrogen bond.

c. Ionic or electrovalent bonds are formed by mutual sharing of electrons between atoms.

d. Loss of electrons is called Oxidation and Gain of electron is called Reduction.

e. The electrons which are not involved in bonding are called valence electrons.



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4. Discuss in brief about the properties of Coordinate covalent compounds.

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5. Find the oxidation number of the elements in the following compounds.

a. C in CO_2 b. Mn in $MnSO_4$ c. N in HNO_3

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In Text Problems

1. Find the oxidation number of Mn in $KMnO_4$

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2. Find the oxidation number of Cr in $Na_2Cr_2O_7$

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3. Find the oxidation number of Cr in $CuSO_4$

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4. Find the oxidation number of Fe in FeO

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Additional Questions | Short Answers Questions

1. What is an ionic or electrovalent bond?

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2. What is electrovalency?

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3. Write a short note on oxidizing and reducing agents.

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4. What is a redex reaction?

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Additional Questions | Long Answers Questions

1. Mention some oxidation reactions that occur in daily life.

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2. What Is Fajan's rule? Discuss.

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3. What are the differences between ionic, covalent and coordination covalent bond?



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