

1. Ionic compounds consist of charged ions.
2. Ionic compounds have melting points due to ionic bonds.
3. The physical state of ionic compounds is
4. Ionic compounds conduct electricity in their
5. The nature of bond in compounds of alkali and alkaline earth metals is
6. compounds have low boiling points because of intermolecular forces.
7. In covalent compounds, the bond is formed due to the.....of electrons.
8. Melting and boiling points of covalent compounds are generally.....
9. Covalent bond is rigid and directional, it is responsible for
10. Most covalent compounds have density than that of water.
11. The electronegativities of atoms giving covalent molecules are generally
12. Atoms of the same element combine to form molecules by means of bonds.
13. A solution of a electrolyte will contain both ions and molecules of the solute.
14. In sodium chloride, the Na^+ ion has the configuration and the Cl^- ion has the configuration.
15. A compound conducted electricity in the fused state. The compound is made-up of
16. The duplet or octet structure of valence shell makes of an element chemically
17. The atomic number of oxygen is 8. The total number of electrons in the O^{2-} ion is
18. The atomic number of oxygen is 8. The number of protons in the O^{2-} ion is
19. Two nitrogen atoms join together by sharing pairs of electrons.
20. In NH_4^+ all the four bonds are.....
21. The water molecules easily break the bonds between the oppositely charged ions. The ions drift in water in all possible directions and hence electrovalent compounds in water.
22. A molecule of.....contains a triple bond.
23. are identical to a normal covalent compound.
24. Metals are goodbecause they are electron.....
25. Electrovalent compounds have.....melting points.

Column A	Column B
1. Metal	Methane (CH ₄)
2. Covalent compound	Sodium chloride (NaCl)
3. Non-polar	Selenium (Se)
4. Polar	Chloride ion (Cl ⁻)
5. Non-metal	Aluminium (Al)
6. Electrovalent compound	Carbon dioxide (CO ₂)
7. Anion	Hydrogen chloride (HCl)
8. Cation	Potassium ion (K ⁺)

MULTIPLE CHOICE QUESTIONS

- The number of electrons lost or gained by an atom refers to :
 - Electrovalency
 - Covalency
 - Donation
 - Acceptance
- The capacity of an atom to attract the shared pair of electrons towards itself is called :
 - Electronegativity
 - Electron affinity
 - Sharing of electrons
 - Electron donation
- Which of the following doesn't represent oxidation ?
 - Loss of electrons
 - Addition of oxygen
 - Increase in oxidation number
 - Addition of hydrogen
- Sodium and sodium ions :
 - Are chemically same
 - Have same number of electrons
 - Have same number of protons
 - None of the above
- The most ionic compound of periodic table is :
 - Sodium chloride
 - Potassium chloride
 - Magnesium chloride
 - Caesium chloride
- The molecule containing a triple covalent bond is :
 - Ammonia
 - Methane
 - Water
 - Nitrogen
- A compound having one lone pair of electrons :
 - Water
 - Methane
 - Ammonia
 - Hydrogen sulphide
- A compound X consists of only molecules. Hence X will have :
 - A crystalline hard structure
 - A low melting point and low boiling point
 - An ionic bond
 - A strong force of attraction between its molecules
- Bonding in this molecule can be understood to involve coordinate bonding :
 - Carbontetrachloride
 - Hydrogen
 - Hydrogen chloride
 - Ammonium chloride
- Which of the following is a common characteristic of a covalent compound ?
 - High melting point
 - Consists of molecules
 - Always soluble in water
 - Conducts electricity when it is in the molten state

Q1. ONE WORD ANSWER

1. A bond formed by the transfer of electrons.
2. A bond formed by the sharing of electrons.
3. A bond formed by a shared pair of electrons with both electrons coming from the same atom.
4. Bond present in metallic chloride and between two chlorine atoms.
5. Electrons lost or gained by an atom in compound formation.
6. Ions formed by the loss and gain of electrons respectively.
7. The process in which an atom lose electrons.
8. The process in which an atom gain electrons.
9. An inert gas which contain triple bond.
10. A molecule with little affinity.
11. Two molecules, which are polar.
12. A polar covalent molecule.
13. A non-polar covalent compound.
14. A covalent molecule which on dissolving form ions.
15. A molecule with one lone pair and three bond pairs.
16. A molecule with two lone pairs and two bond pairs.

Q2. WRITE IN DETAIL

1. A cation is smaller than the atom from which it is formed. Why ?
2. Why electrovalent compounds form hard crystals ?
3. Why electrovalent compounds have high melting, boiling points and low volatility ?
4. Why electrovalent compounds in crystalline state do not conduct electricity ?
5. Why molten NaCl conduct electricity but, CCl₄ does not ?
6. Why covalent compounds are generally liquids or gases ?
7. Why all covalent compounds are bad conductor of electricity ?
8. On what factors the formation of an electrovalent compound depends ?
9. In the formation of compound XY₂, atom X gives one electron to each Y atom. What is the nature
10. of bond to XY₂ ? Give four properties of XY₂.
11. There are three elements E, F, G with atomic numbers 19, 8 and 17 respectively.
 - (i) Classify the elements as metals and non-metals.
 - (ii) Give the molecular formula of the compound formed between E and G and state the type of chemical bond in this compound.
12.
 - (i) Give one property of hydrogen chloride which agrees with it being a covalent compound.
 - (ii) Give one property of magnesium chloride which agrees with it being an ionic compound.
 - (iii) Name one compound which is covalent, but on dissolving in water conducts electricity ?
 - (iv) Which property of the above compound agrees with the being of a covalent compound ?
13. A compound has the formula H₂Y (Y = Non-metal). State the following :
 - (i) The outer electronic configuration of Y.
 - (ii) The valency of Y.
 - (iii) The bonding present in H₂Y.
 - (iv) The formula of the compound formed between calcium [40
20 Ca] and Y.
14. Which conditions are necessary for the formation of coordinate bond ?
15. Explain the formation of H₃O⁺ and NH₄⁺ ion.
16. What is lone pair effect ? In what kind of compound does this effect occur