

Quiz 5

Date: _____

Name: _____



A multiple choice quiz. Tick the boxes to record the answer

1. Which of the following is the advantages of hydrogen bonds formed between ethanol molecules?

- A ☐ Ethanol exists as a volatile liquid
- B ☐ Ethanol dissolves in organic solvents.
- C ☐ Ethanol could conduct electricity.
- D ☒ Ethanol is soluble in water.

2. Which of the following substances form dative bonds?

- A ☒ Ammonium ions, NH_3
- B ☐ Methane, CH_4
- C ☐ Carbonate ions, CO_3^{2-}
- D ☐ Hydroxide ions, OH^-

3. Which statement is true about dative bonds?

- A ☐ Its formation involves transfer of electrons
- B ☒ Its formation involves sharing of electrons
- C ☐ Its formation involves delocalising of electrons
- D ☐ Its formation involves a big difference in electronegativity between two atoms

4. Substance G is a good heat and electrical conductor in solid and molten states. Which of the following chemical bond is found in substance G?

- A ☐ Dative Bond
- B ☐ Ionic Bond
- C ☐ Covalent Bond
- D ☒ Metallic Bond

5. Which of the following statements explains why aluminium is a better electrical conductor than sodium?

- A ☐ Relative atomic mass of aluminium is greater than relative atomic mass of sodium.
- B ☐ Aluminium forms metallic bonds but sodium forms ionic bond
- C ☐ Aluminium atoms have more electrons than sodium atoms.
- D ☒ Aluminium atoms have more valence electron than sodium atoms.

6. Which compound consists of only electrovalent bonds?

- A ☐ Sodium Nitrate
- B ☐ Carbon dioxide
- C ☒ Calcium oxide
- D ☐ Ammonium Chloride

7. Tetrachloromethane, CCl_4 , is an example of covalent compound. Which of the following is the property of tetrachloromethane?

- A ☐ Could conduct electricity in all states
- B ☐ High melting and boiling points
- C ☐ Do not dissolve in organic solvents
- D ☒ Weak forces of attraction between its molecules

8. Substance Z have low melting point and boiling point and do not conduct electricity in all states. Which of the following is most probably substance Z?

- A ☐ Sodium chloride
- B ☐ Magnesium oxide
- C ☒ Tetrachloromethane
- D ☐ Silicon oxide

9. Which statement best explains why covalent molecules such as ammonia, NH_3 dissolve in water?

- A ☐ The relative molecular mass of ammonia and the relative molecular mass of water is almost the same
- B ☒ Ammonia molecule could form hydrogen bonds with water molecules
- C ☐ Ammonia molecules could form dative bonds with water molecules
- D ☐ Both ammonia and water form covalent molecules.

10. Atom X and atoms Y reacts to produce an ionic compound with the formula XY_2 . If the proton number of atom X is 17, what is the proton number of atom Y?

- A ☐ 9
- B ☒ 12
- C ☐ 11
- D ☐ 3