



Bonding, Structure and Properties of Matter

Multiple Choice Questions

Set 4

You may use the periodic table to answer these questions.

Tick **one** box.

1. What type of bonding involves delocalised electrons?
 - A. covalent bonding
 - B. hydrogen bonding
 - C. ionic bonding
 - D. metallic bonding

2. Which symbol is used in a chemical equation to represent a substance dissolved in water?
 - A. (aq)
 - B. (d)
 - C. (l)
 - D. (w)

3. What happens to the electrons in ionic bonding?
 - A. electrons are transferred from one atom to another
 - B. pairs of electrons are shared between atoms
 - C. electrons are delocalised and move throughout the structure
 - D. electrons are released into the surroundings

4. Which of the following pairs of elements can form a covalent bond?
 - A. sodium and oxygen
 - B. magnesium and oxygen
 - C. hydrogen and chlorine
 - D. magnesium and chlorine

5. Which of the following is **not** a property of a typical metal.
 - A. they are brittle
 - B. they conduct electricity
 - C. they can be bent and shaped
 - D. they have high melting points



6. Complete the sentence: Ionic compounds can conduct electricity when...

- A. solid
- B. dissolved in water
- C. heated to 100°C
- D. broken into smaller pieces

7. Which of the following is a property of small molecules?

- A. they are hard
- B. they can conduct electricity
- C. they have a low boiling point
- D. they are solid at room temperature

8. What does the letter n represent in the formula for a polymer?

- A. the number of carbon atoms
- B. the number of covalent bonds
- C. the number of repeating units
- D. the number of intermolecular forces

9. How many covalent bonds does each carbon atom form in diamond?

- A. 1
- B. 2
- C. 3
- D. 4

10. Which statement about carbon nanotubes is **not** correct?

- A. they have a high tensile strength
- B. they have low length to diameter ratios
- C. they have a cylindrical shape
- D. they can be used in electronics