

Properties of Water Assignment – Student Edition

I. MULTIPLE CHOICE. Select the best answer.

- All of the following are considered to be properties of water except _____.
 - It shows no reaction on both red and blue litmus paper.
 - It has a low surface tension.
 - It increases in volume on heating.
 - It is a polar compound.
- There are _____ bonds between the water molecules
 - hydrogen
 - covalent
 - ionic
 - metallic
- A liquid boils at 100°C , which of the following is another property which will confirm the liquid is pure water?
 - Sugar dissolves in it.
 - When it freezes, its density decreases.
 - Neutral on both litmus paper.
 - It evaporates on heating.
- When the temperature of water drops below 4°C , _____.
 - it expands.
 - it shrinks.
 - it doesn't change.
 - its density increases.
- The molecular shape of a water molecule is called _____.
 - pyramidal
 - A-shaped
 - triangle
 - bent

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II. Explain the following.

1. The presence of hydrogen bonds between water molecules.

2. Pure water doesn't affect litmus paper.

3. Although sugar is a covalent compound, it dissolves in water.

4. Water has high melting and boiling point.

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III. Two equal masses of pure water, one of them is at 20°C and the other is at 2°C. Which of them has the larger volume? Why?

IV. Explain why water is essential to life.

V. Water is made up of two hydrogen atoms bonded to an oxygen atom.

1. Name the type of bonds which exist between the atoms in a water molecule.

2. Describe why this bond forms

3. Explain the arrangement of electrons which form this bond.

VI. Explain why water is called the universal solvent.
