NAME - JAGADISH PANIGRAHI, CLASS - VI
SECTION — A SCHOOL NO - 4659
CHAP-4 EX-1 ELEMENTS, COMPOUNDS, SYMBOLS AND FORMULAE

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Q:-3. Define a pure substance. Name the types of pure substances you know.

Ans:→ A substance of a definite composition which has consistent properties throughout, is called a pure substance. pure substances are of two types:-

(i) Elements and
(ii) Compounds

pure substances have characteristic colour, odour and taste. pure substances cannot be broken into simpler substances by any physical means. They have uniform composition throughout, i.e. they are homogeneous. They have a definite set of physical and chemical properties. They have fixed melting and boiling points. For example: water is a pure substance, it has a fixed boiling point of 100°C and it freezes at 0°C. If some common salt is mixed in it, the resulting solution boils at a higher temperature and freezes at a lower temperature, that means it has some impurity.

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Q:-5. Give two examples for each of the following:

Ans:- (a) metals:- Examples:- Gold, Silver

(b) Non-metals:- Examples:- Sulphur phosphorus

(c) Metalloids:- Examples:- Iron, Silicon

(d) Noble gases:- Examples:- helium, neon

Q:-> 6. Name the elements which form water. State three characteristics of water to justify that it is a compound.

Ans:- Water is made up of 2 elements namely Oxygen and hydrogen. Two hydrogen atoms and one oxygen atom combine to give one molecule of water. water is a compound because compounds are made up of different elements in fixed proportion by mass likewise, in water molecule, hydrogen and oxygen form compound $H_2O$ in the ratio of 1:8 by mass. From whatever source the water is taken and tested, the ratio of hydrogen and

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- oxygen is found to be the same.

- The properties of water are entirely different from those of its constituent Element. Hydrogen and oxygen are gases, but water is a liquid under normal conditions. Hydrogen burns itself, oxygen supports burning but water helps in puting off fire.

- water molecule cannot be broken into its constituent elements hydrogen and oxygen by simple physical methods. Its components can only be separated by a chemical process known as electrolysis.

- Heat and light are produced when hydrogen and oxygen burn together and chemically combine to form water.

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Q7. Give three differences between metals and nonmetals.

Ans ⇒

| Metals | Nonmetals. |
| --- | --- |
| 1) They are solids | 1) Nonmetals are either soft solid or gases |
| 2) They are good conductors of heat and electricity | 2) Non-metals are bad conductors of heat and electricity |
| 3) They have high melting and boiling points | 3) They have low melting and boiling points |

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