PUBLIC SCHOOL DARBHANGA

SESSION (2020-21)

CLASS-VI

SCIENCE

MATTER AND ITS NATURE

A. Answer the following in not more than 20 words.

1. What is matter? Give three examples of things made up of matter.
2. How does an alloy differ from a metal? Name two alloys.
3. What are atoms are made of?
4. What are the electrical natures of the particles the atom is made of?

B. Answer the following in not more than 40 words.

1. What is the difference between liquid and gases?
2. Name the three metals. Mention three characteristics of nonmetals.

C. Answer the following in not more than 100 words.

1. How are metals and nonmetals used? Give five examples each.
2. Describe how the fundamental particles are arranged in the atom.

ANSWERS:

A. Answer the following in not more than 20 words.

1. **What is matter? Give three examples of things made up of matter**

   The matter is everything that we come across in our lives, like the air you breathe, the clothes you wear, cool drinks.

2. **How does an alloy differ from a metal? Name two alloys.**

   Alloys An alloy is a metal mixed with other metal(s) and /or non-metal(s).

   Steel, the most common alloy, contains iron with small amount of carbon and manganese. whereas bronze contains copper and tin.

3. **What are atoms are made of?**

   The atom is not the ultimate particle. There are still smaller particles which the atom itself is made of. These are **electrons, protons** and **neutrons**, called the fundamental of subatomic particles.

4. **What are the electrical natures of the particles the atom is made of?**

   The electrical charges on an electron and proton are equal in magnitude but opposite in nature. An electron is a very light particle, carrying a negative electrical charge. A proton is a much heavier particle than an electron, carrying a positive electrical charge. A neutron is as heavy as a proton, but carries no electrical charge.

B.**Answer the following in not more than 40 words.**

1. **What is the difference between liquid and gases?**

Liquids do not have their own shape but can take the shape of the container they are in and they can flow at a given temperature. Examples of liquids are tea, water and blood.
They can be different colours and thickness.
Gases are air-like substances that can move around freely or flow to fit a container and they don't have their own shape.

2. **Name the three metals. Mention three characteristicsof nonmetals.**

Calcium, sodium, magnesium, aluminum, zinc, iron, tin copper, mercury, silver, gold and platinum are examples of metals.

three characteristics of nonmetals

Contrast to metals they have no luster they are dull looking (except iodine and graphite).

They are brittle if solid, i.e they break when bent, beaten or pressed. They are nonsonorous.

C. Answer the following in not more than 100 words.

1. **How are metals and nonmetals used? Give five examples each.**

   Calcium, sodium, magnesium, aluminum, zinc, iron, tin copper, mercury, silver, gold and platinum are examples of metals. Metals help us in many ways. We use them in the construction of houses, railway track, automobiles, locomotives, aircraft factories and machinery. They are also used for agricultural tools, surgical equipment, electrical appliances, utensils and cutlery.

   Non-metals are also of great importance to us. The air that we breathe is made up mainly of nitrogen (about 79%) and oxygen (about 20%) we would not be able to live without oxygen. Water, which is also essential for our existence, is made up of hydrogen and oxygen. Chlorine is used to kill germs present in drinking water. Iodine is used to heal wounds and sprains. Sulphur is used to cure skin diseases. Carbon is the main constituent of coal. All living things-Plants and animals-mainly contain substances made of carbon.

2. **Describe how the fundamental particles are arranged in the atom.**

The atom is not the ultimate particle. There are still smaller particles which the atom itself is made of. These are **electrons, protons** and **neutrons**, called the fundamental of subatomic particles.

Charge is an electrical property of some fundamental particles. It occurs in two opposite forms which by convention we call positive or negative. Two particles of similar charge (i.e. both positive or both negative) repel each other. But two particles of opposite charge (i.e. one positive and one negative) attract each other.

The electrical charges on an electron and proton are equal in magnitude but opposite in nature. An electron is a very light particle, carrying a negative electrical charge. A proton is a much heavier particle than an electron, carrying a positive electrical charge. A neutron is as heavy as a proton, but carries no electrical charge.