

Chemistry (New Book) - 9th Class Chemistry English Medium Chapter 2 Preparation

Q1. Why does the energy of electron increase as we move from first shell to second shell.

Ans 1: The energy of n electron increases as we move from the first to the second shell because the second shell is farther away from the nucleus which means that electron in the second shell has high energy as compared to the electron in the first shell. This increase in distance from the nucleus results in a higher energy level for electron in outer shell.

Q2. Why isotopes of an element show same chemical properties while their physical properties are different.

Ans 1: Isotopes have same chemical properties because they have same electronic configuration and have same atomic number. Isotopes have different physical properties because they have different mass number.

Q3. What are sub-atomic particles.

Ans 1: Sub-atomic particles are the fundamental particles that make up atoms. The three main sub-atomic particles are electrons, protons, and neutrons. These particles were later named as electrons. It was also shown that electrons are the subatomic particles of all elements.

Q4. Write application of radioactive isotopes.

Ans 1: Radioactive isotopes are used to test the strength of metals and concrete mixture. They are used to generate cheap nuclear power. They are also used to find oil fields.

Q5. How can atoms be seen.

Ans 1: The size of an atom is so small that it is not possible to see it with the naked eye. However, a transmission electron microscope can be used to see atoms.

Q6. Why Gallium does not evaporate?

Ans 1: Gallium melting point is below body temperature so it is liquid at room temperature. It does not evaporate.

Q7. How many atoms does our body replace every year.

Ans 1: Every year our body replaces about 98% of its atoms.

Q8. What percentage of the atom's mass is contained in the nucleus.

Ans 1: Although the nucleus is less than one hundred-thousandth of the size of the atom it contains more than 99.9% of the mass of the atom.

Q9. What is gallium that makes it unique from other metals.

Ans 1: Gallium has many interesting properties. Its melting point is below body temperature so it is liquid at room temperature. It has water-like viscosity. It does not evaporate.

Q10. Define relative isotopic masses.

Ans 1: An element usually consists of a few different isotopes with different mass numbers. These mass numbers are called relative isotopic masses. Each isotope will also have its own naturally occurring abundance which is called isotopic abundance.
