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

Q1. How ions and isotopes are formed.

Ans 1: Changing the numbe rof electrons of an element forms ions, While changing the numebr of neutrons of an element forms isotopes.

Q2. Give an example of a radioactive isotope which disintegrates to give a stable atom.

Ans 1: A radioactive isotope the disintegrate to give a stable atoms is Uranium -238

Q3. 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.

Q4. Write application of radioactive isotopes.

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

Q5. Compare the masses of the atoms of Mg and Cl

Ans 1: Magnesium: The relative atomic mass of Magnesium is 24.31 amu

Chlorine: The relative atomic mass of chlorine is 35.45 amu

Q6. Why does a radioactive isotope emit radiation?

Ans 1: Radioactiv eisotopes emit radiation becasue they have unstable nuclei.

Q7. Define Nuclear Fission

Ans 1: It involves splitting of heavy atomic nuclei into lighter elements. This process is commonly used in nuclear reactors to generate energy.

Q8. Why is it said that almost all the mass of an atom is concentrated in its nucleus?

Ans 1: Almost all the mass of an atom is concentrated in its nucleus because the nucleus contains protons and neutrons, which

have much greater mass as compared to the electron that orbit around the nucleus. Protons and netrons are approximately 1836 times more massive that electrons.

Q9. How many times cesium is bigger than helium.

Ans 1: The largest atom cesium is appoximately nine time biggerf than the smalles atom helium

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Q10. Why isotopes of an element show same chemicla properties while their physical properties are different.

Ans 1: Isotpes have same chemicla properties because they have same electronic configuration and have same atomic numebr. Isotopes have different physical properties beacues they have different mass number.
