

Science

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(Chapter – 4) (Structure Of The Atom)

(Class – IX)

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Question 1:

On the basis of Thomson's model of an atom, explain how the atom is neutral as a whole.

Answer 1:

According to Thomson's model of the atom, an atom consists of both negatively and positively charged particles. The negatively charged particles are embedded in the positively charged sphere. These negative and positive charges are equal in magnitude. Thus, by counterbalancing each other's effect, they make an atom neutral.

Question 2:

On the basis of Rutherford's model of an atom, which subatomic particle is present in the nucleus of an atom?

Answer 2:

On the basis of Rutherford's model of an atom, protons (positively-charged particles) are present in the nucleus of an atom.

Question 3:

Draw a sketch of Bohr's model of an atom with three shells.

Answer 3:



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Question 4:

What do you think would be the observation if the α -particle scattering experiment is carried out using a foil of a metal other than gold?

Answer 4:

If the α -scattering experiment is carried out using a foil of a metal rather than gold, there would be no change in the observation. In the α -scattering experiment, a gold foil was taken because gold is malleable and a thin foil of gold can be easily made. It is difficult to make such foils from other metals.