

**Q 1.**

What are canal rays?

**SOLUTION:**

The beam of rays which travel in a direction away from anode towards cathode when a gas taken in a discharge tube is subjected to the action of high voltage under low pressure are known as canal rays. It is also called anode rays. It was discovered by E. Goldstein in 1886.

**Q 2.**

If an atom contains one electron and one proton, will it carry any charge or not?

**SOLUTION:**

No, the atom will not carry any charge because electron has negative charge ( $-1$ ) and proton has positive charge ( $+1$ ). They neutralise each other.

**Q 3.**

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

**SOLUTION:**

According to Thomson's model of an atom :

A. An atom consists of a positively charged sphere and the electrons are embedded like the seeds in a water-melon.

B. The negative and positive charges are equal in magnitude. So, the atom as a whole is electrically neutral.

**Q 4.**

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

**SOLUTION:**

Proton, positively charged sub-atomic particle is present in the nucleus of an atom.

**Q 5.**

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

**SOLUTION:**