

QUES 05:-

If the sun and the planets carried huge amounts of opposite charges,

- i. all three of Kepler's laws would still be valid.
- ii. only the third law will be valid.
- iii. the second law will not change.
- iv. the first law will still be valid.

Sol. If the sun and the planets carried huge amounts of opposite charges then the electrostatic force of attraction will act between the sun and the planets.

We know that electrostatic or Columbic force follows inverse square law and thus both the gravitational and electrostatic force will add up in nature and the net force will also follow inverse square law.

Therefore, since both the forces are of the same nature, Kepler's law will still be valid.