

Problem 2) Under the influence of the Coulomb field of charge  $+Q$ , a charge  $-q$  is moving around it in an elliptical orbit. Find out the correct statement(s).

[JEE 2009, 4/160, -1]

- 1) The angular momentum of the charge  $-q$  is constant.
- 2) The linear momentum of the charge  $-q$  is constant.
- 3) The angular velocity of the charge  $-q$  is constant.
- 4) The linear speed of the charge  $-q$  is constant

Ans) 1