A proton enters a uniform magnetic field that is perpendicular to the proton’s velocity. What happens to the kinetic energy of the proton?

1) it increases
2) it decreases
3) it stays the same
4) depends on the velocity direction
5) depends on the $B$ field direction

If there is a current in the loop in the direction shown, the loop will:

1) move up
2) move down
3) rotate clockwise
4) rotate counterclockwise
5) both rotate and move