9 An electron travels in a vacuum with speed v perpendicular to a magnetic field of flux density B. The electron moves in a circular orbit of radius r given by

$$r = \frac{mv}{Be}$$

where m is the mass of the electron and e is its charge.

Which statement about the angular velocity of the electron is correct?

A It increases as B is increased.

B It increases as v is increased.

C It decreases as B is increased.

D It decreases as v is increased.

10 Near the surface of a planet, the gravitational field strength is uniform. The gravitational potential