14 A satellite of mass 50 kg moves from a point where the gravitational potential due to the Earth is –20 MJ kg^{-1}, to another point where the gravitational potential is –60 MJ kg^{-1}.

In which direction does the satellite move and what is its change in potential energy?

A closer to the Earth and loss of 40 MJ of potential energy

B further from the Earth and a gain of 40 MJ of potential energy

C closer to the Earth and a loss of 2000 MJ of potential energy

D further from the Earth and a gain of 2000 MJ of potential energy

15 In which group below do all three quantities remain constant when a particle moves in