11 A satellite is orbiting the Earth with a radius of 6610 km at a speed of 7780 m s^{-1}. The satellite is boosted to a higher orbit of radius 6890 km. Given that the mass of the Earth is 6.0×10^{24} kg, the speed of the satellite in the new orbit is

A 7460 m s^{-1} **B** 7620 m s^{-1} **C** 7940 m s^{-1} **D** 8110 m s^{-1}