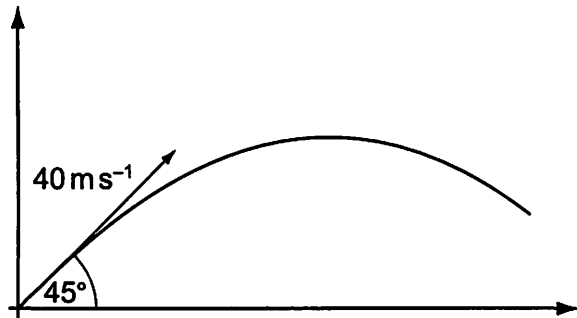5   An object is projected with velocity 40 m s^{-1} at an angle of 45° to the horizontal. Air resistance is negligible.

What is the speed of the object after 5.0 s?

A   21 m s^{-1} B   28 m s^{-1} C   35 m s^{-1} D   49 m s^{-1}