4 **(a)** A body undergoes simple harmonic motion.

The variation with displacement x of its velocity v is shown in Fig. 4.1.
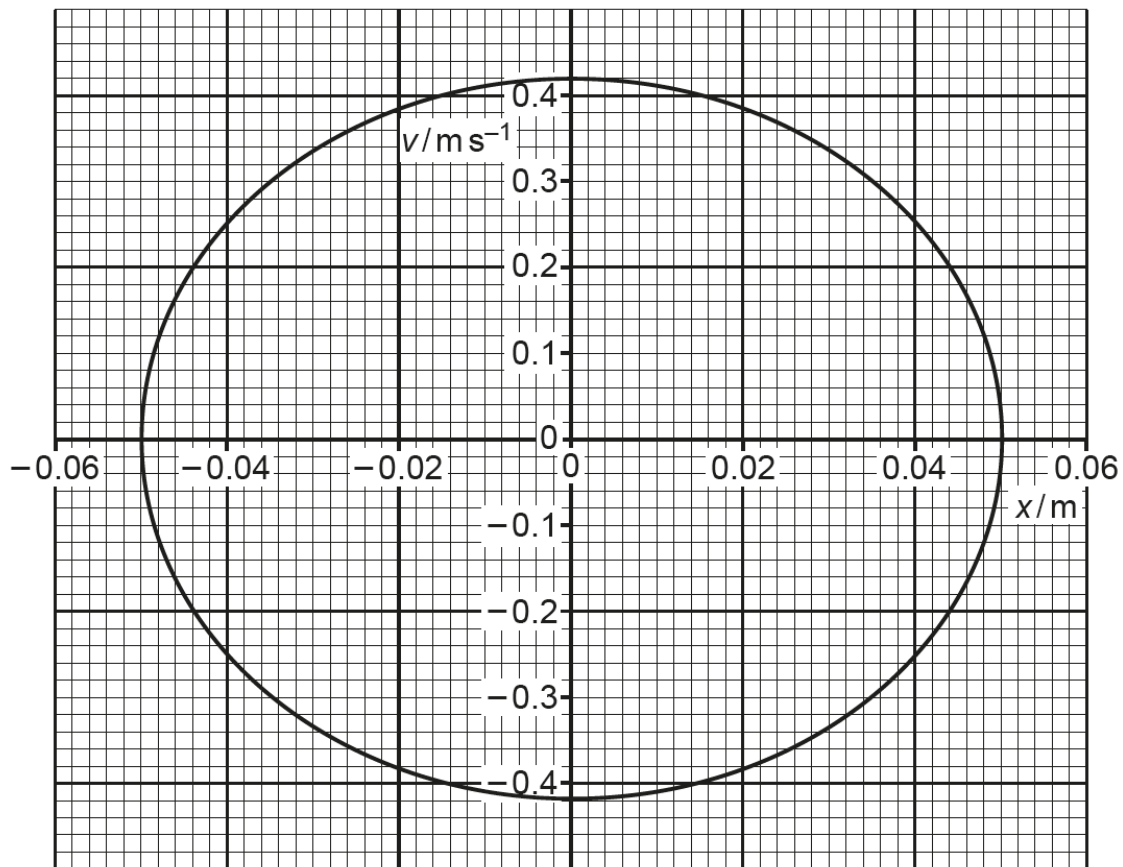

Fig. 4.1

(i) State the amplitude, x_o, of the oscillations.

$x_o =$ .... m [1]

(ii) Calculate the period, T, of the oscillations.

T = ………………… s [3]

(b)   On Fig. 4.1, label a point with letter P where the body has maximum potential energy.
[1]