One end of a light elastic string of natural length 0.8 m and modulus of elasticity 24 N is attached to a fixed point O. The other end of the string is attached to a particle P of mass 0.3 kg. P is projected vertically upwards with speed $4\,\text{m}\,\text{s}^{-1}$ from a position 1.2 m vertically below O.

(i) Calculate the speed of the particle at the position where it is moving with zero acceleration. [5]

(ii) Show that the particle moves 1.2 m while moving upwards with constant deceleration. [3]