A particle P of mass 0.3 kg is attached to one end of a light elastic string of natural length 0.6 m and modulus of elasticity 9 N. The other end of the string is attached to a fixed point O on a smooth plane inclined at 30° to the horizontal. OA is a line of greatest slope of the plane with A below the level of O and $OA = 0.8$ m. The particle P is released from rest at A.

(i) Find the initial acceleration of P. [4]

(ii) Find the greatest speed of P. [5]