8 **(a)** Explain the concept of *work*.

....

....

.... [2]

(b) A table tennis ball falls vertically through air. Fig. 8.1 shows the variation of the kinetic energy E_K of the ball with distance h fallen. The ball reaches the ground after falling through a distance h_0.
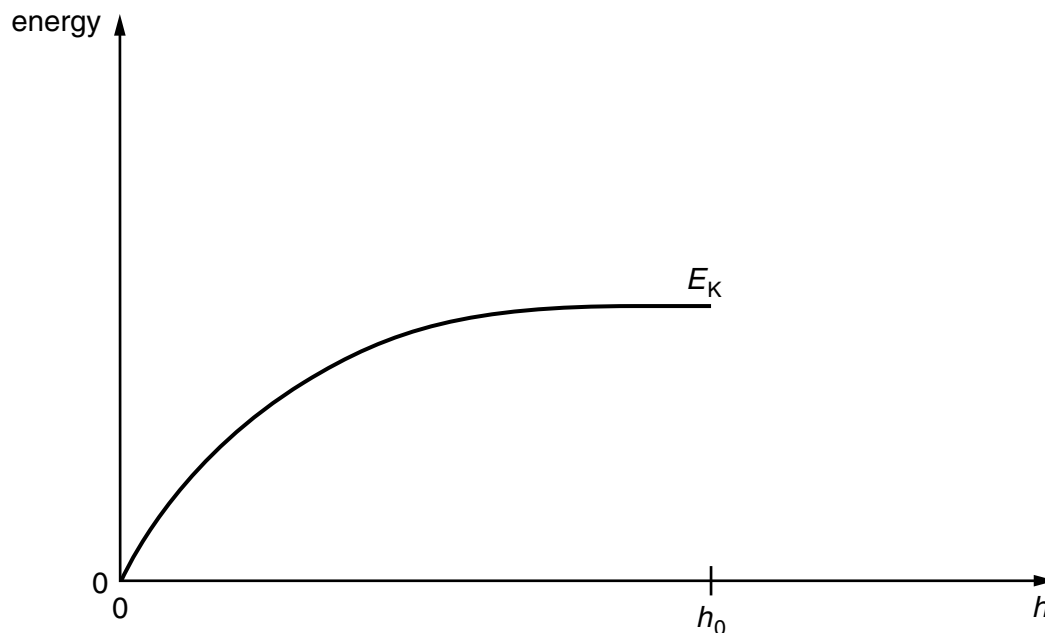
energy

E_K

0

0 h_0 h

Fig. 8.1

(i) Describe the motion of the ball.

....

....

....

....

.... [3]

(ii) On Fig. 8.1, draw a line to show the variation with h of the gravitational potential energy E_P of the ball. At $h = h_0$, the potential energy is zero.   [3]