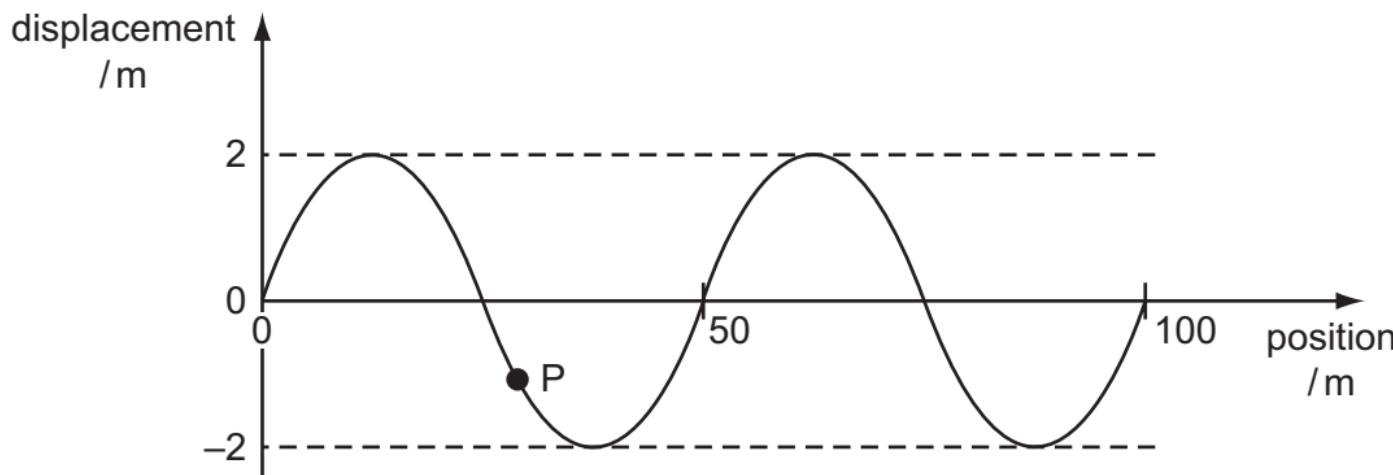


- 23 The graph represents a sinusoidal wave in the sea, travelling at a speed of 8.0 m s^{-1} , at one instant of time. The maximum speed of the oscillating particles in the wave is $2 af$, where a is the amplitude and f is the frequency.



An object P of mass $2.0 \times 10^{-3} \text{ kg}$ floats on the surface.

What is the maximum kinetic energy of P due to the wave? Assume that its motion is vertical.

A 0.026 mJ

B 4.0 mJ

C 39 mJ

D 64 mJ

- 24 Monochromatic light illuminates two narrow parallel slits. The interference pattern which results is