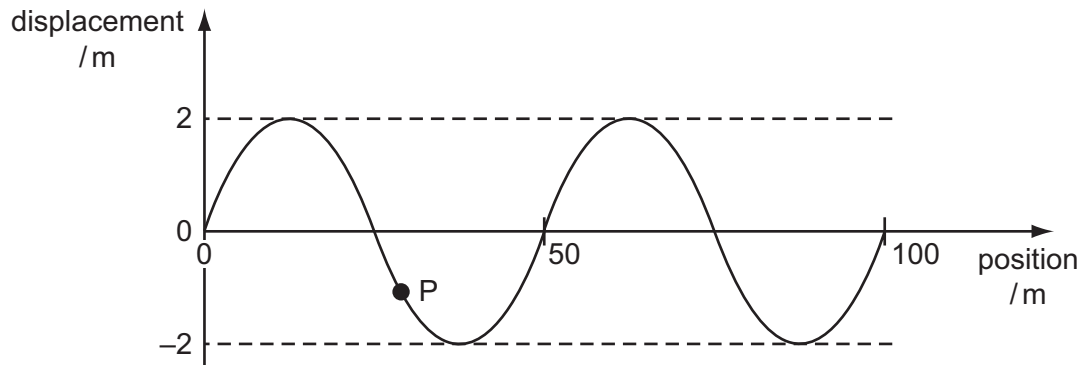


- 23** The graph represents a sinusoidal wave in the sea, travelling at a speed of 8.0 m s^{-1} , at one instant of time. The maximum speed of the oscillating particles in the wave is $2\pi af$, where a is the amplitude and f is the frequency.



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