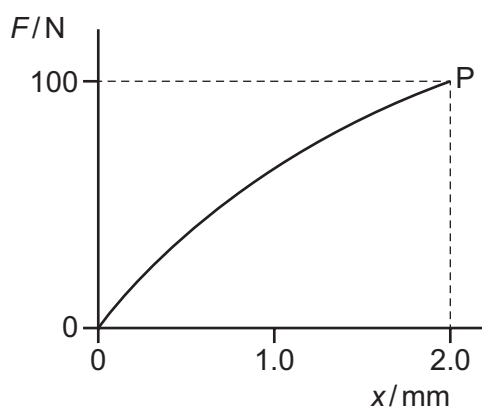


- 20** The graph shows the non-linear force–extension curve for a wire made from a new composite material.



What is the best estimate of the work done in stretching the wire to point P?

- A** 0.09 J **B** 0.10 J **C** 0.11 J **D** 0.20 J
- 21** A wave of frequency 15 Hz travels at 24 m s^{-1} through a medium.

What is the phase difference between two points 2.0 m apart?

- A** There is no phase difference.
- B** They are out of phase by a quarter of a cycle.
- C** They are out of phase by half a cycle.
- D** They are out of phase by 0.80 of a cycle.
- 22** Which row describes a longitudinal wave and a medium through which it can travel?

	direction of oscillation of the medium compared with the direction of propagation of wave energy	medium
A	parallel	air
B	parallel	vacuum
C	perpendicular	air
D	perpendicular	vacuum