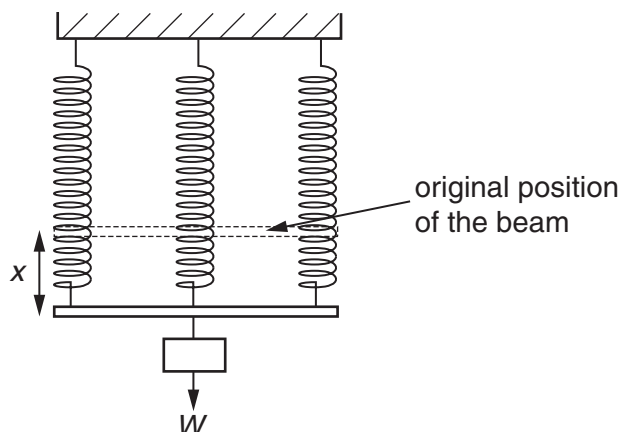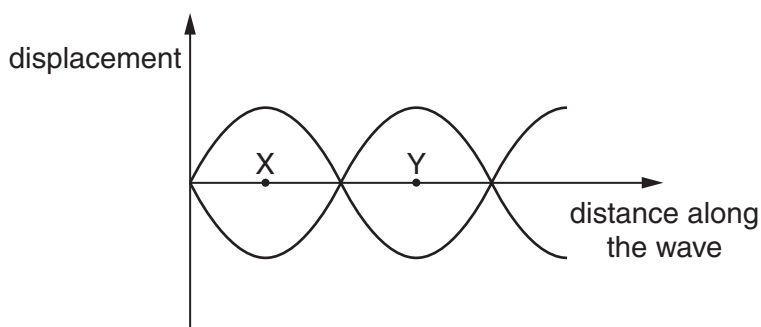**22** A beam, the weight of which may be neglected, is supported by three identical springs. When a weight W is hung from the middle of the beam, the extension of each spring is x.

original position of the beam

The middle spring and the weight are removed.

What is the extension when a weight of $2W$ is hung from the middle of the beam?

A $\dfrac{3x}{2}$ **B** $\dfrac{4x}{3}$ **C** $2x$ **D** $3x$

23 Which of the following is true for all transverse waves?

  A They are all electromagnetic.

  B They can all be polarised.

  C They can all travel through a vacuum.

  D They all involve the oscillation of atoms.

24 The graph represents a stationary wave at two different times.

What does the distance XY represent?

  A half the amplitude

  B half the frequency

  C half the period

  D half the wavelength