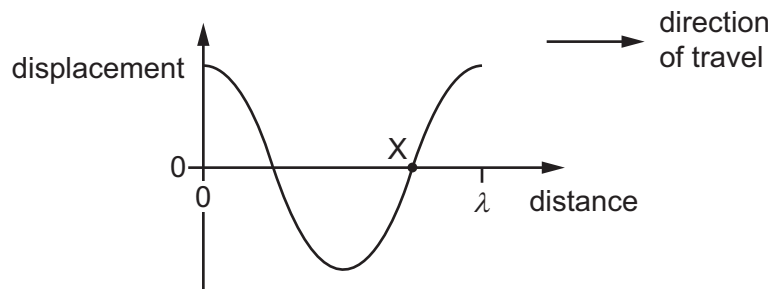


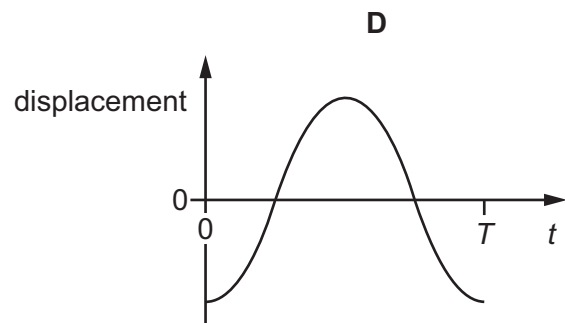
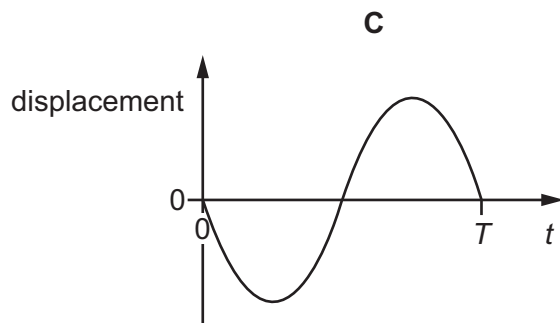
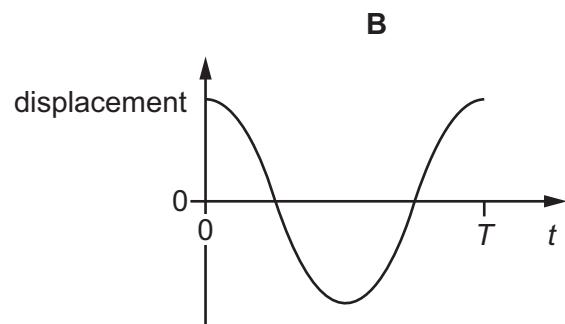
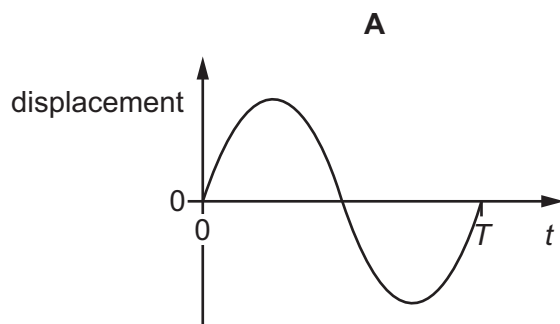
**21** A transverse wave on a rope has wavelength  $\lambda$  and period  $T$ .

The graph shows the variation of the displacement of the particles of the rope with distance in the direction of travel of the wave at time  $t = 0$ .



A particle X is labelled.

Which graph shows the variation of the displacement of particle X with time  $t$ ?



**22** Which statement about the relationship between the frequency  $f$  and the period  $T$  of a wave is correct?