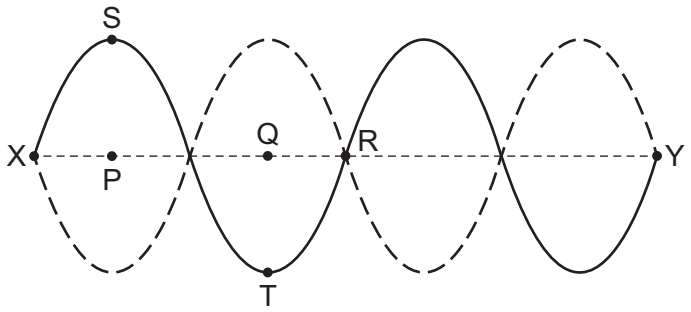
25 The diagram shows a string stretched between fixed points X and Y. There is a stationary wave on the string.



The solid curve shows the string at a position of maximum displacement at time t_0. The dashed curve shows the other position of maximum displacement. The straight central dashed line shows the mean position of the string.

Point S on the string is directly above point P. Point T on the string is directly below point Q.

Which statement is correct?

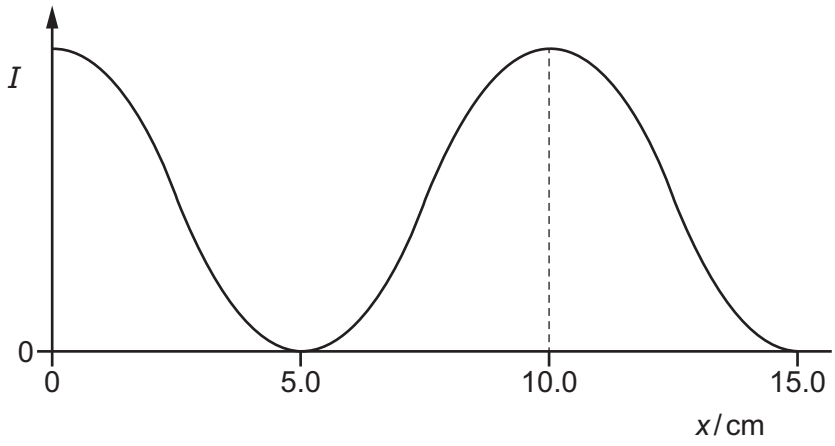
A A short time after t_0, point R on the string will be displaced.

B A short time after t_0, points S and T on the string move in opposite directions.

C The distance between P and Q is one wavelength.

D Two moving points on the string that are equal distances from point R vibrate in phase.

26 The variation with distance x of the intensity I along a stationary sound wave in air is shown.



The speed of sound in air is $340\,\text{m}\,\text{s}^{-1}$.

What is the frequency of the sound wave?

A 1700 Hz **B** 2300 Hz **C** 3400 Hz **D** 6800 Hz