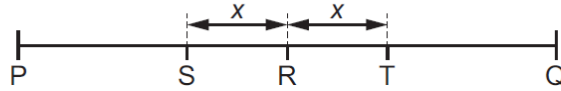P and Q are fixed points at the end of a string. A transverse stationary wave of constant maximum amplitude is formed on the string.

P, R and Q are the only points on the string where the displacements are always zero. S and T are two points on the string at a distance x from R.

Points S and T have

A

the same amplitude and are in phase.

B

the same amplitude and a phase difference of 180°.

C

different amplitudes and are in phase.

D

different amplitudes and a phase difference of 180°.