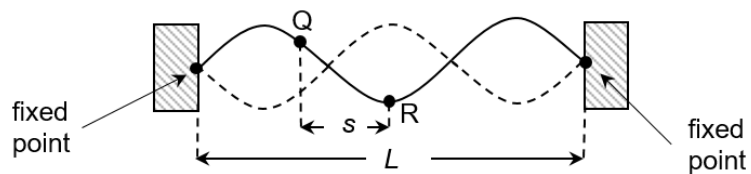


- 18 A stationary wave is formed on a stretched string of length  $L$  between two points as shown below.



Particles Q and R on the string are separated by distance  $s$ . The total energy of Q and of R are  $E_Q$  and  $E_R$  respectively.

Which of the following gives the correct phase difference between Q and R, and the relationship between  $E_Q$  and  $E_R$ ?

	phase difference / rad	total energy
<b>A</b>	$\frac{2s}{L}\pi$	$E_Q = E_R$
<b>B</b>	$\frac{2s}{L}\pi$	$E_Q < E_R$
<b>C</b>	$\pi$	$E_Q = E_R$
<b>D</b>	$\pi$	$E_Q < E_R$