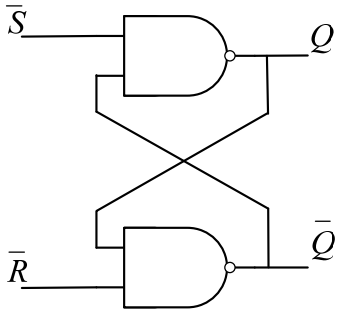
Q19. The figure shows an RS flip-flop using two NAND gates. Which of the following is the correct truth table for the flip-flop? Here, "unchanged" shown in the table means the outputs maintain a previous state, and "unstable" means the outputs are in an unstable state.



a)

Input		Output	
$\overline{S}$	$\overline{R}$	Q	$\overline{Q}$
0	0	unchanged	
0	1	0	1
1	0	1	0
1	1	unstable	

b)

Input		Output	
$\overline{S}$	$\overline{R}$	Q	$\overline{Q}$
0	0	unchanged	
0	1	1	0
1	0	0	1
1	1	unstable	

c)

Input		Output	
$\overline{S}$	$\overline{R}$	Q	$\overline{Q}$
0	0	unstable	
0	1	0	1
1	0	1	0
1	1	unchanged	

d)

Input		Output	
$\overline{S}$	$\overline{R}$	Q	$\overline{Q}$
0	0	unstable	
0	1	1	0
1	0	0	1
1	1	unchanged	