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Q19:

$$\text{profit} = 5 [-\text{Max}(S_T - 35, 0) + 9.21(1.08)] \leftarrow \text{short } \textcircled{1}$$

$$+ 3 [\text{Max}(S_T - 42, 0) - 4.29(1.08)] \leftarrow \text{long } \textcircled{2}$$

• $S_T < 35 \rightarrow \textcircled{1}$ and $\textcircled{2}$ Not executed

$$\begin{aligned} \text{profit} &= 5(9.21(1.08)) - 3(4.29(1.08)) \\ &= 35.8 \end{aligned}$$

• $35 \leq S_T < 42 \rightarrow \textcircled{1}$ executed $\textcircled{2}$ Not executed

$$\text{Profit} = 5 [-S_T + 35 + 9.21(1.08)] + 3(-4.29(1.08))$$

$$\begin{aligned} &= -5S_T + 224.7 - 13.9 \\ &= -5S_T + 210.8 \end{aligned}$$

• $S_T \geq 42 \rightarrow \textcircled{1}$ and $\textcircled{2}$ executed

$$\text{profit} = 5 [-S_T + 35 + 9.21(1.08)] + 3 [S_T - 42 - 4.29(1.08)]$$

$$\begin{aligned} &= -5S_T + 224.7 + 3S_T - 139.9 \\ &= -2S_T + 84.8 \end{aligned}$$

	Max	Min
$S_T < 35$	35.8	35.8
$35 \leq S_T < 42$	35.8	0.8
$S_T \geq 42$	0.8	$-\infty$

\therefore The answer is A

Max: 35.8, min: Unlimited

\therefore Answer (A)