25. A firm earns a revenue of Rs 50 when the market price of a good is Rs 10. The market price increase to Rs 15 and the firm now earns a revenue of Rs 150. What is the price elasticity of the firm's supply curve?

Ans: At Price, P_1 = Rs 10

Total Revenue, $TR_1 = P_1 \times Q_1 = 50$

$$= \frac{TR_1}{P_1} = Q_1$$

$$= \frac{50}{10} = Q_1$$

$$= Q_1 = 5 \ units$$

At Price, P_2 = Rs 15

Total Revenue, $TR_2 = P_2 \times Q_2 = 150$

$$= Q_2 = \frac{TR_2}{P_2}$$

$$= Q_2 = \frac{150}{15}$$

$$= Q_2 = 10 \ units$$

Elasticity of supply, $e_s = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$

$\Delta Q = Q_2 - Q_1 = 10 - 5 = 5$

P = $P_1 - P_2$ = 15 – 10 = 5

$$e_s = \frac{5}{5} \times \frac{10}{5}$$

$$e_s = 2$$

********** END **********