Q21. Explain price elasticity of demand.
Ans: Price elasticity of demand is the measure of the degree of responsiveness of the demand for a good to the changes in its price. It is defined as the percentage change in the demand for a good divided by the percentage change in its price.

$$e_d = \frac{\text{percentage change in the demand for a good}}{\text{percentage change in the price of a good}}$$

$$e_d = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

Where,

$\Delta Q = Q_2 - Q_1$, change in demand

$\Delta P = P_2 - P_1$, change in price

P = initial price

Q = initial quantity

22. Consider the demand for a good. At price Rs 4, the demand for the good is 25 units. Suppose price of the good increases to Rs 5, and as a result, the demand for the good falls to 20 units. Calculate the price elasticity.

**Ans:** $P_1 = 4$ , $Q_1 = 25$

$P_2 = 5$ , $Q_2 = 20$

$\Delta P = P_2 - P_1 = 5 - 4 = 1$

$\Delta Q = Q_2 - Q_1 = 20 - 25 = -5$

$e_d = \dfrac{\Delta Q}{\Delta P} \times \dfrac{P}{Q}$

$= \dfrac{-5}{1} \times \dfrac{4}{25}$

$= \dfrac{-4}{5}$

$e_d = -0.8$

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