Q23. Consider the demand curve D (p) = 10 – 3p. What is the elasticity at price 5/3?

**Ans:** D(p) = 10 – 3p

$\frac{\Delta D(p)}{\Delta p}$ =-3 = Change in demand per unit change in price.

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

$$\Phi -3 \times \frac{p}{10-3p} \Phi \frac{-3p}{10-3p}$$

At price p = $\frac{5}{3}$,

$$e_d = \frac{-3 \times \frac{5}{3}}{10-3\left(\frac{5}{3}\right)}$$

$$e_d \Phi \frac{-5}{5} = -1$$

i.e., the elasticity of demand at price p = $\frac{5}{3}$ is unitary elastic.

Q24. Suppose the price elasticity of demand for a good is – 0.2. If there is a 5 % increase in the price of the good, by what percentage will the demand for the good go down?

**Ans:** $e_d$ = -0.2 [Note that $e_d$ = -2. Hence we need not prefix ed to (-2)]
Percentage change in price = 5%

$$e_d = \frac{\text{percentage change in demand}}{\text{percentage change in price}}$$

$$0.2 = \frac{\text{percentage change in demand}}{5}$$

1.0 = percentage change in demand

= 1%

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