** Income Elasticity of Demenend

Income elasticity of demand measures the response of change in the quantity demanded after the change in Income level.

$$e_y = \frac{\text{Proportionate change in demand}}{\text{Proportionate change in Income}}$$

$$e_y = \frac{\Delta X}{\Delta Y} \cdot \frac{Y}{X}$$

Where,

Δx = change in quantity demanded.

x = Initial quantity demanded.

Δy = change in income.

y = initial income.

** Degrees of Income Elasticity of demand.

(1) Elasticity greater than Unit ($e_y > 1$).

When the proportion of income spent on goods increase as income increases.

Ex- Luxury goods.

$$\frac{\Delta x}{x} > \frac{\Delta y}{y}$$

(ii) Unitary elasticity ($e_y = 1$) - If the proportion of Income spent remain same even though the income has increased.

Ex- Comforts goods. $\frac{\Delta X}{X} = \frac{\Delta Y}{Y}$

(iii) Income Elasticity less than unit ($e_y < 1$).

When the proportion of income spent on a goods decreases as income increases.

Ex- necessities goods. $\frac{\Delta X}{X} < \frac{\Delta Y}{Y}$

(iv) Zero income elasticity ($e_y = 0$)

If with the increase in income the quantity demanded remains unchanged.

$$\frac{\Delta X}{X} = 0$$

(v) Negative income Elasticity. ($e_y < 0$)

In the case of inferior goods, the consumer will reduce his consumption of It, when his income increases.

* The income elasticity of demand in the case of inferior goods is negative.