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SUBJECT- PRINCIPLES OF ECONOMICS

PRICE ELASTICITY OF DEMAND - I

we learnt that the law of demand which explains the inverse relationship between price and quantity demanded of a commodity. The law of demand explains only direction of change in quantity demanded but does not tell us by how much amount the quantity demanded changes due to change in the price. The response of quantity demanded changes due to change in the price. The response of quantity demanded to change in price of the commodity differs in different cases. This forms the subject matter of the study of price elasticity of demand.

* MEANING OF ELASTICITY OF DEMAND

Demand for a commodity is affected by many factors such as its price, price of related goods, income of its buyer, tastes and preferences etc. Elasticity means degree of response. Elasticity of demand means degree of responsiveness of demand. Demand for a commodity responds to change in price, price of related goods, income etc. So, we have three dimensions of elasticity of demand.

(i) Price elasticity of demand:- Price elasticity of demand means degree of responsiveness of demand for a commodity to the change in its price. For example, if demand for a commodity rises by 10% due to 5% fall in its price,

Price elasticity of demand (e_p)

$$= \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price of the commodity}}$$

$$= \frac{10}{(-)5} = (-)2$$

Note that e_p will always be negative due to inverse relationship of price and quantity demanded.

(ii) Income elasticity of demand: Income elasticity of demand refers to the degree of responsiveness of demand for a commodity to the change in income of its buyer. Suppose, income of buyer rises by 10% and his demand for a commodity rises by 20%, then,

Income elasticity of demand (e_y).

$$= \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price of the commodity}}$$

$$= \frac{20}{10} = 2$$

(iii) Cross Elasticity of demand: Cross elasticity of demand means the degree of responsiveness of demand for a commodity to the change in price of its related goods (substitute goods or complementary goods). Suppose, demand for a commodity rises by 10% due to 5% rise in price of its substitute good, then Cross elasticity of demand (e_c).

$$= \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price of related goods}}$$

$$= \frac{10}{5} = 2$$

(Tastes and preferences cannot be expressed numerically. So, elasticity of demand cannot be numerically expressed.)