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SUBJECT- PRINCIPLES OF ECONOMICS

METHODS OF MEASUREMENT OF PRICE ELASTICITY OF DEMAND - II

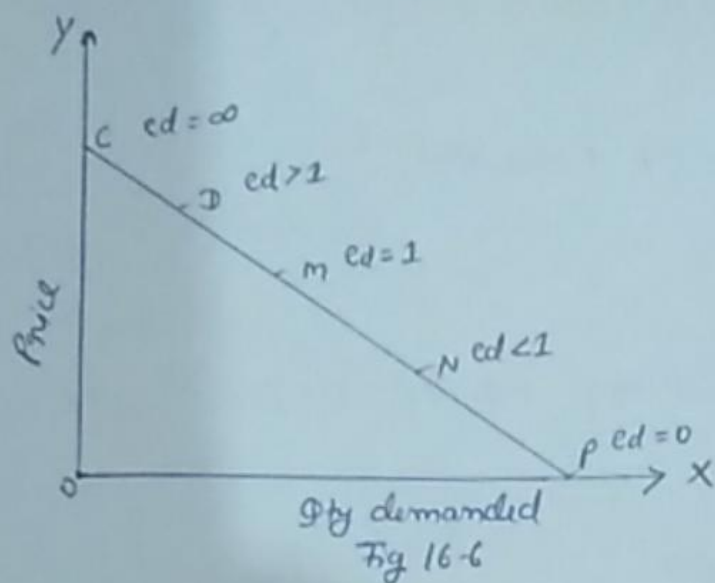
### \* GEOMETRIC METHOD

This method is also known as 'point method'. Geometric method is used to measure the elasticity at a point on the straight line demand curve. Elasticity of demand is different at different points on the same straight line demand curve.

According to the geometric method, elasticity of demand at any point of a straight line demand curve is measured as a ratio of lower segment of the demand curve and upper segment of the demand curve.

$$e_d = \frac{\text{Lower segment of the demand curve}}{\text{Upper segment of the demand curve}}$$

Let us consider a straight line demand curve AB at which elasticity of demand is to be measured at point C, D, M, N and P (Fig 16.5)



M is the mid-point of the demand curve AB.

$$\text{So, } e_d \text{ at point } M = \frac{\text{lower segment of the demand curve}}{\text{upper segment of the demand curve}}$$

$$= \frac{MP}{MC} = 1$$

(Because  $MP = MC$ )

$$e_d \text{ at point } N = \frac{NP}{NC}$$

Point N is below point M so NP is less than NC and elasticity will be less than one.

$$e_d \text{ at point } P = \frac{0}{PC} = 0$$

(Pure lower segment is 0)

$$e_d \text{ at point } D = \frac{DP}{DC}$$

Point D is above point M. So, DP is more than DC. Elasticity at this point will be more than one.

$$e_d \text{ at point } C = \frac{CP}{0} = \infty$$

(Upper segment is 0)

So, we can conclude that elasticity at mid-point of a straight line demand curve will be 1, elasticity at every point below the mid-point will be less than one and elasticity at every point above the mid-point will be greater than one.