Module-II

3. Demand function

Q.1 Explain Demand Function.

(A) **Demand Function :-** A demand function is the relationship between the quantity demand and its Determinants.

(B) **Meaning :-** "Demand function is a functional relationship between Demand of commodity & its determinants"

$$Q_x = F(P_x, Y, P_s, T, N, E, A, I, S)$$

$Q_x \rightarrow$ Quantity demanded for X commodity
$F \rightarrow$ Functional relation.
$P_x \rightarrow$ Price of commodity X
$Y \rightarrow$ Income of consumer
$P_s \rightarrow$ Price of Substitutes goods
$P_2 \rightarrow$ Price of complimentry goods
$T \rightarrow$ Taste, Preference of consumers
$N \rightarrow$ Size & distribution of Population
$E \rightarrow$ Future Expectations.
$A \rightarrow$ Advertising and Salesmanship Exp.
$I \rightarrow$ Interest Rate
$S \rightarrow$ Socio-Cultural factors.

Demand is always related with Price, Place, Person, time etc.

(C) **Important Points of Demand Function are :-**

1) Demand is Directly related to some factors e.g. Income.
2) Demand is inversely related to some Variables like - Price.

(3) Demand function explain functional relationship between Qty. Demanded and its determinants.

(4) Some of the Variables are easily Quanifiable.
(e.g) Price of Commodity, Price of Substitutes, Income of Consumer, Size of Population etc.
But some of the Variables are not easily Quantifiable.
(e.g) Taste and Preference, Future Expectation, Consumer's Psychology etc.

(5) Every Firm have different degree of control over the different determinants.

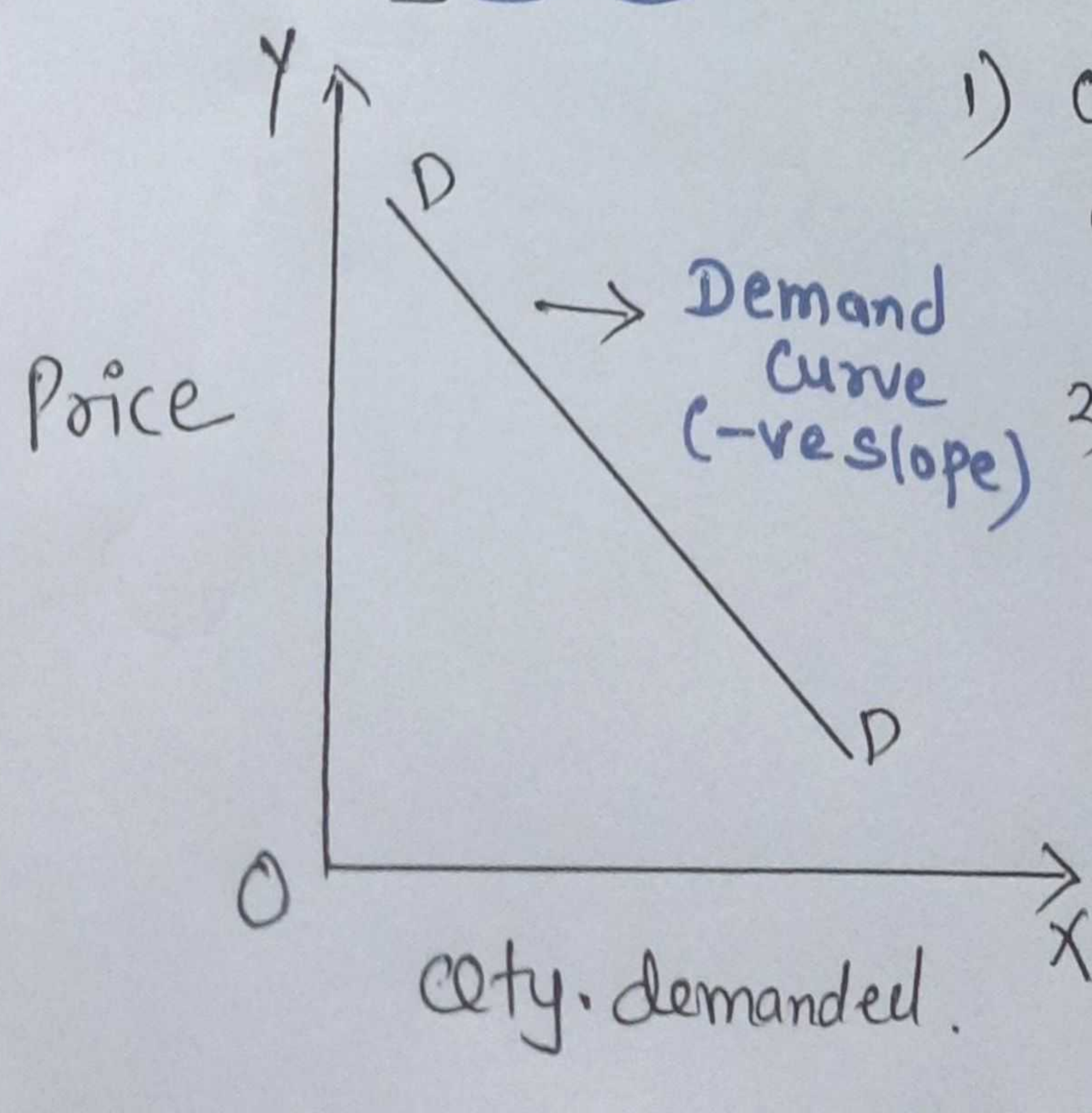
(D) **Linear Demand Function** :- A Linear Demand Function is mathematically written as.

$$\boxed{Q = a - bP}$$

Q → Qty. demanded
P → Price of commodity
a & b → are +ve numbers.

Left Hand side → Q → Dependent Variables.
Right hand side → a-bp → Independent Variables.

(E) **Diagram**



1) On x-axis Qty. demanded and On Y-axis Price of commodity are shown.
2) DD is Demand curve sloping downward from left to Right.
3) It has Negative slope.

Q:2 Explain Nature of Demand Curves in Different Markets?

Ⓐ **Introduction :-** Market is a place where buyers and sellers come together to buy and sell the commodities.

Ⓑ **Meaning :-** "Market is an arrangement whereby buyers and sellers come in close contact with eachother directly or indirectly"

Ⓒ **Nature OF Demand Curves Under Different Markets.**

ON the basis of Competition There are Four types of markets :-

* ① Perfect Market.
* ② Monopoly Market.
* ③ Monopolistic Market.
* ④ Oligopoly Market.

① **Demand Curve in Perfect Market :-**

According to Marshall -

"Perfect Market is a market situation where large number of buyers and sellers come together to deal with Homogeneous commodity at Uniform Price determined by Demand force and supply force"

In Perfect Market we observe —

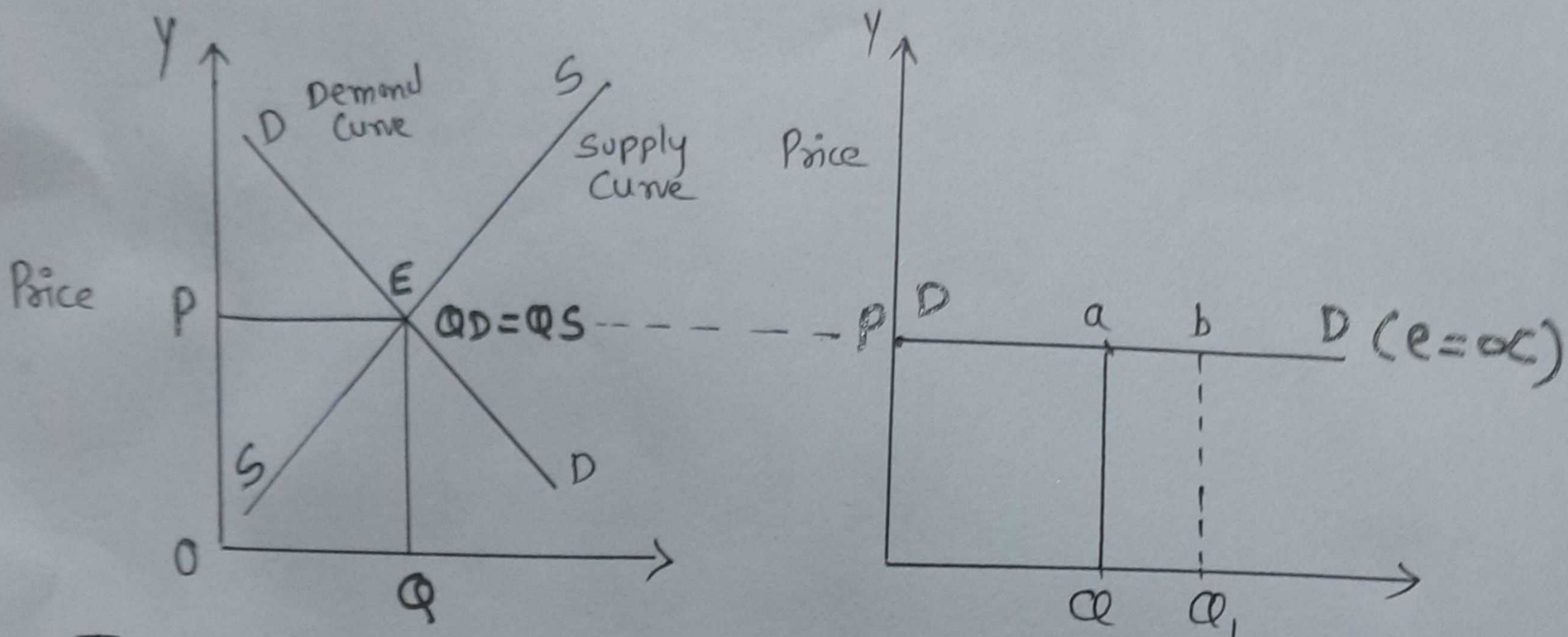
i) Large number of Buyers and seller influence the market Price.

ii) As all the commodities are Homogeneous, so Uniform Price is determined in this market.

iii) Every Buyers and sellers in this market are Price-takers but not Price makers.

iv) Equilibrium Price is determined in Perfect market where Quantity Demanded = Quantity Supplied.

Diagram :-



★ In Perfect Market Equilibrium Price is determined, where Demand Curve intersect supply curve. (QD=QS)

★ OP = Uniform Price Prevail in Perfect market.

★ Demand Curve in Perfect market is Perfectly Elastic Demand curve which have Horizontal slope.

(2) Demand Curve in Monopoly Market :-

According to Chamberlin -

" Monopoly means a Single Firm which have control over the supply of Product which has no close-Substitutes"

In monopoly market we observe -

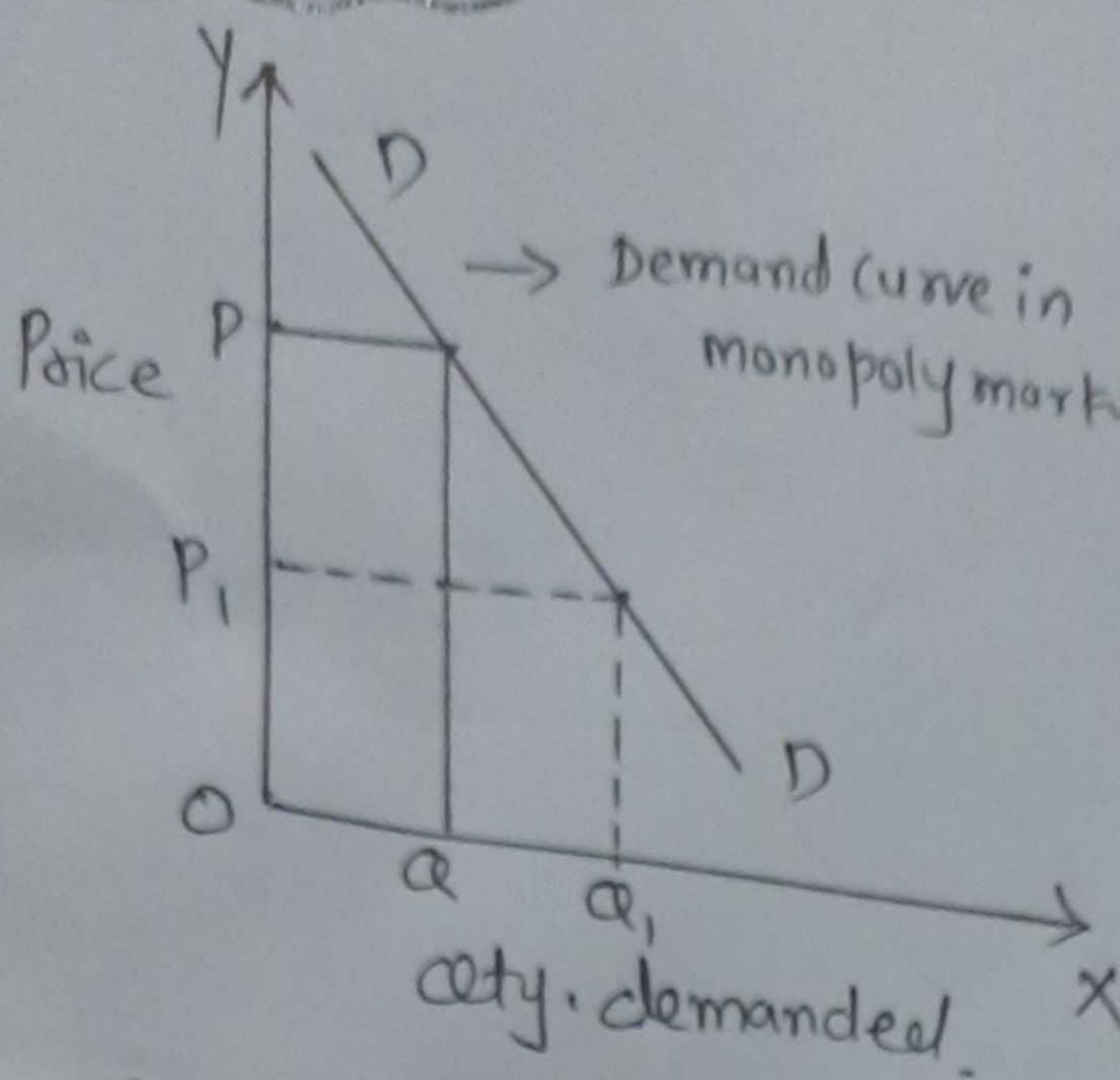
i) There exist only one seller in the market with no Close Substitutes

ii) There is No Competition in the market, So there is Zero Cross Elasticity OF Demand.

iii) Monopoly has control over entire market supply. So he is Price maker but not Price taker.

iv) Monopoly Follows Price- Discrimination Policy to earn maximum Profit in market.

Diagram.



→ Demand curve in monopoly market.

1) In monopoly market Demand Curve is Sloping Downward.
2) By Reducing Price from OP to OP_1, Producer Can Sell more from OQ to OQ_1.
3) Monopoly can control either Output or Price.

③ Demand Curve in Monopolistic Market :-

According to Chamberlin -

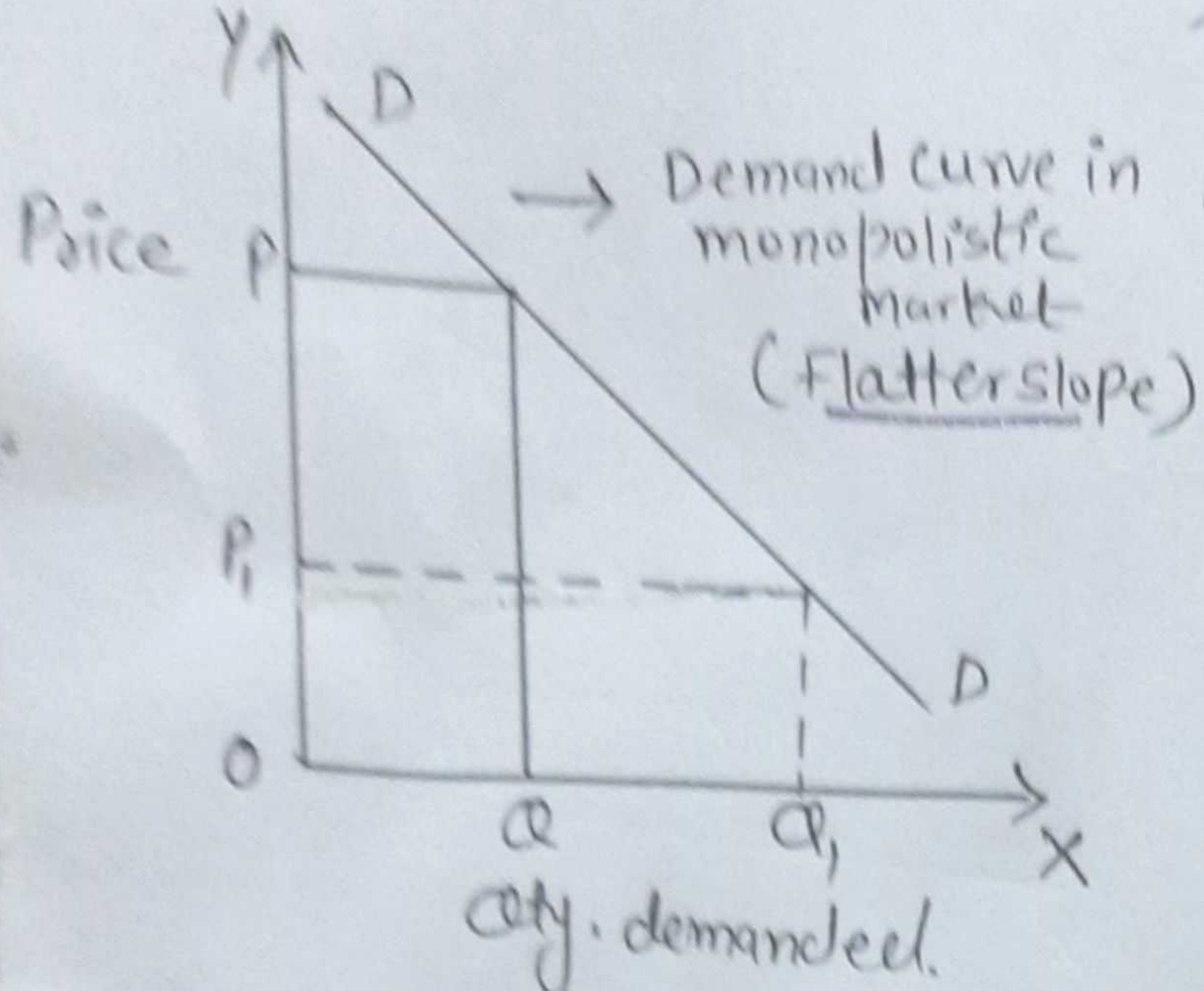
" Monopolistic Competition means Competition among large number of Sellers Producing Close but not Perfect Substitutes "

Monopolistic Competition = Perfect Market + Monopoly Market.

In monopolistic Market we Observe —

i) Large number of Sellers selling Differentiated Products
ii) In this market, goods are Close Substitute to each other.
iii) Entry to this market is not difficult. Every Producer enjoy Some Control over the Price of their Product.
iv) Selling Cost is the Unique feature of this market because every Producer Follows different strategy For Advertising and Selling the Product.
v) In this market, Producer Can Sell more by reducing Price of Commodity shown as below :-

Diagram



1) In monopolistic market, demand Curve is sloping Downward.
2) The Demand Curve will be more Elastic, It has Flatter Slope.
3) By lowering the Price, Producer Can Sell more qty. in this market.

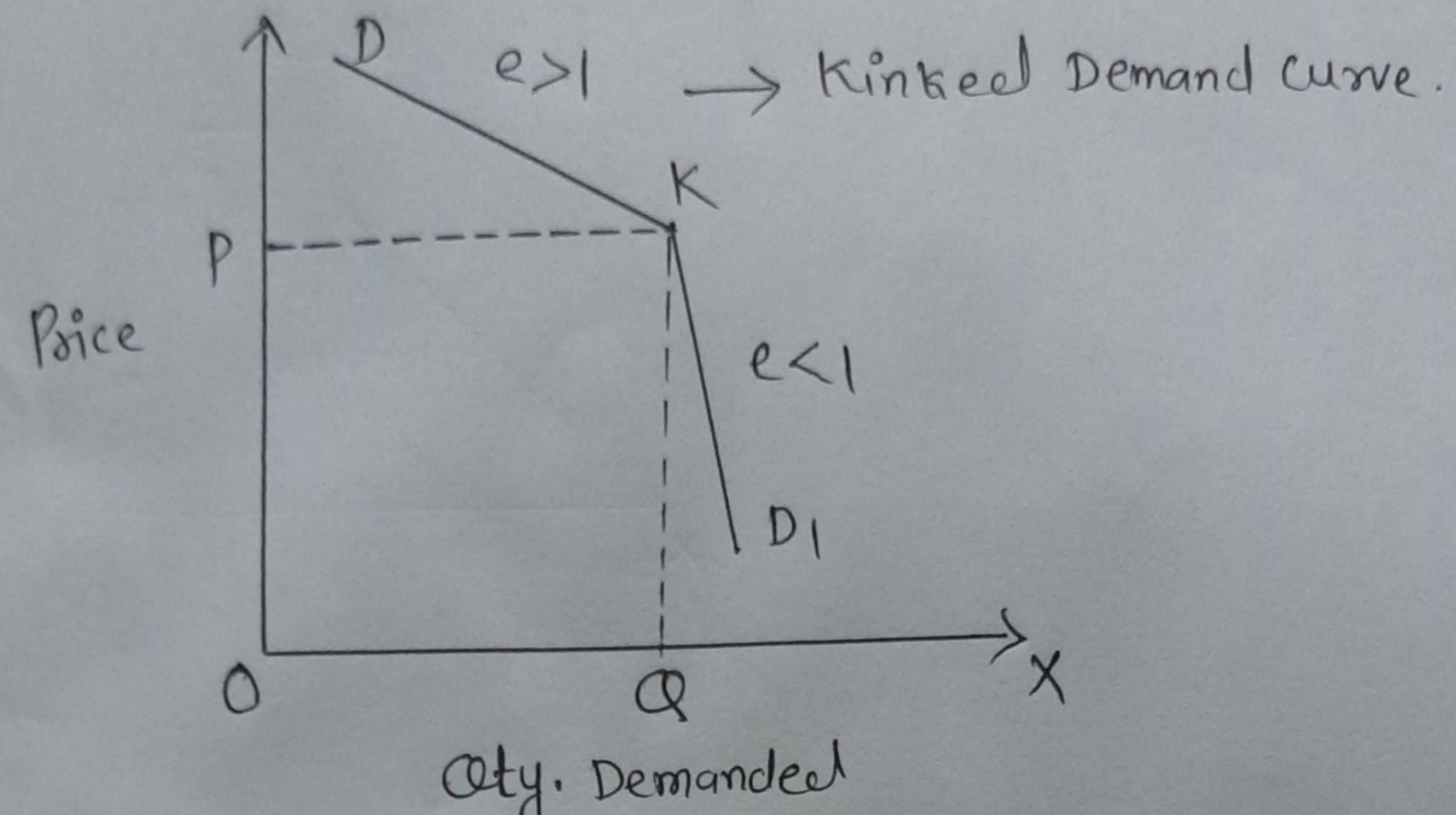
④ Demand Curve in Oligopoly Market :-

"Oligopoly market means Competition among Few Sellers"

In this market we Observe —

i) Few Firms enjoy a good control over Price of market.
ii) These few sellers always interdependent to any action taken by rival firm.
   e.g Changes in Price, changes in design, colour, Selling cost etc.
iii) Advertising Plays a Powerful role in Oligopoly market, For attracting customers.
iv) Due to different behaviour Pattern of Producers, there is element of Uncertainty in market.
   e.g Rivals may Join hands and may try to fight with each other.
v) In this market we find Kinked Demand curve
vi) Entry is Free in this market but it is difficult due to many barriers like Technology, finance etc.
vii) Diagram :-

Diagram :-



i) In oligopoly market DD_1 is Kinked Demand Curve. It is made up of Two segments - DK and KD_1

ii) DK is Relatively Elastic Demand Curve $(e>1)$

iii) KD_1 is Relatively Inelastic Demand Curve $(e<1)$

iv) K is the Kink in Demand curve. It means Turning Point in market. Here OQ Quantity is demanded at OP Price..

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