

## Cost

Expenditure incurred in the production of a certain quantity of a commodity.

उत्पादन के क्षेत्र में किसी वस्तु विशेष की निश्चित मात्रा के लागत को Cost की संज्ञा दी जाती है।

$$C = f(O)$$

Three Types of Cost  $\Rightarrow$

① Money Cost      ② Real Cost      ③ Opportunity Cost

Money Cost:

The expenditure incurred in the area of production by the producer for the procurement of various factors of production for the smooth functioning of production.

मौद्रिक लागत एक प्रकार से उत्पादन क्षेत्र में निहित वह व्यय है जो एक उत्पादक के द्वारा उत्पादन प्रक्रिया को सुचारु रूप से संचालित करने के लिए विभिन्न उत्पादन के साधनों को संग्रहीत करने के लिए किया जाता है।

Money Cost Devided into 3 types.

- (i) Explicit Cost (रूपरे लागत)
- (ii) Implicit Cost (अरूपरे लागत)
- (iii) Normal Profit



Normal Profit  $\Rightarrow$  Normal Profit indicates no profit no loss.

2. Real Cost  $\Rightarrow$

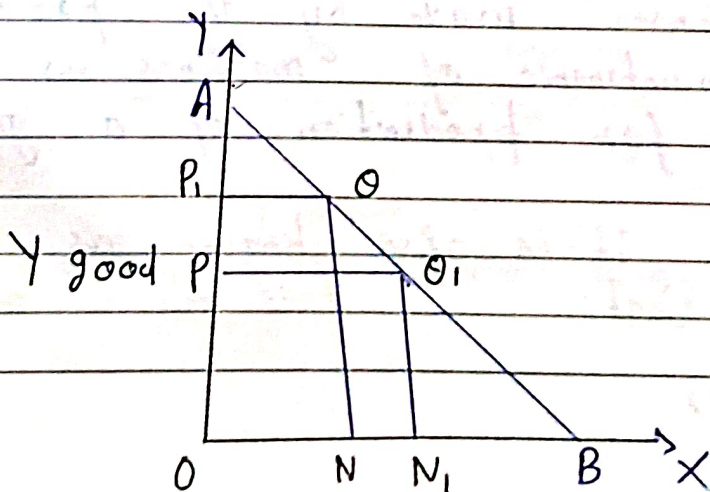
It is developed by classical economics Alfred Marshall

Money cost when consolidated with social cost is real cost.

As per Alfred Marshall production of any good, it includes the various expenses made by producer for the procurement of various factor in the area of production. Production process generate various types of social cost (suffering, sacrifice, obstinence and waiting) summation of money cost with social cost is considered is real cost.

\* Criticised Extensively.

Opportunity Cost (Transformation Cost)  $\Rightarrow$



where  $O, O_1$  are two combinations of two goods which can be produced with given resources.

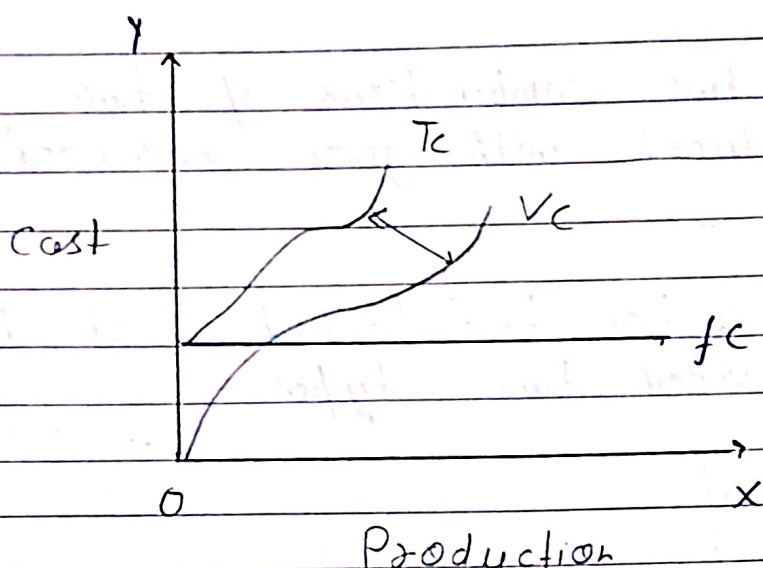
According to production time period cost has been divided into two types.

- (a) Short Run Cost
- (b) Long Run Cost

Fixed Cost (Supplementary Cost)  $\Rightarrow$  Which incurs in the production process does not vary with rise or fall of the production quantity.

Ex- Salary of permanent worker, rent of the land, interest of capital, electricity or water bill.

Q (thousand)	fc	vc	Tc (fc+vc)
0	4		4
1	4	4	8
2	4	7	11
3	4	9	13
4	4	12	16
5	4	16	20
6	4	21	25
7	4	27	31
8	4	34	38
9	4	42	46
10	4	51	55



Variable Cost  $\Rightarrow$

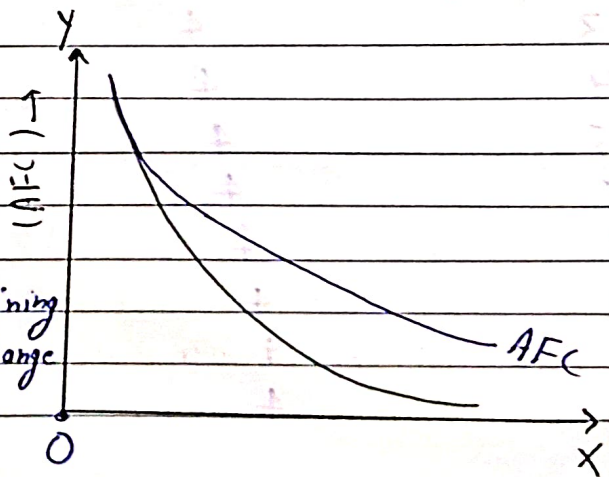
Total Cost  $\Rightarrow$   $TC = TFC + TVC$   
 $TC = f(Q)$

Per Unit Production Cost  $\Rightarrow$

(i) Average Fixed Cost  $\Rightarrow$

$$AFC = \frac{TFC}{Q}$$

(a) AFC is left to right declining curve because TFC is not change and when quantity of production is increase then AFC decrease.

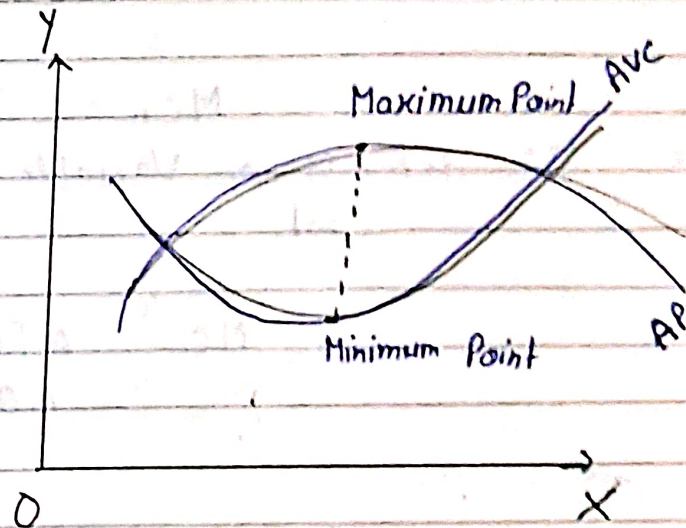


(b) Shape of AFC is Rectangular Hyperbola because it does never touch the axis.

(c) AFC can never zero.

Average Variable Cost  $\Rightarrow$

$$AVC = \frac{TVC}{Q}$$



Average Total Cost  $\Rightarrow$  (AC or ATC)

$$\left. \begin{aligned} AC &= \frac{TC}{Q} \end{aligned} \right\}$$

$$\therefore TC = AFC + TVC$$

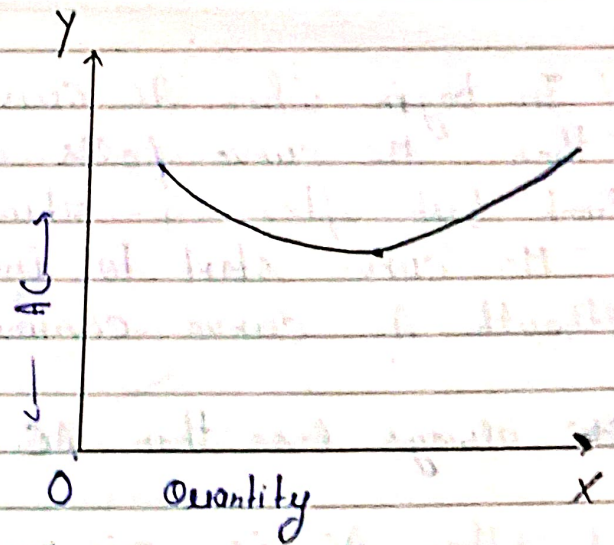
$$ATC = \frac{TC}{Q}$$

$$ATC = \frac{AFC + TVC}{Q}$$

$$ATC = \frac{TFC}{Q} + \frac{TVC}{Q}$$

$$ATC = AFC + AVC$$

$$\left. \begin{aligned} ATC &= AFC + AVC \end{aligned} \right\}$$



Marginal Cost  $\Rightarrow$

$$MC_n = TC_n - TC_{(n-1)}$$

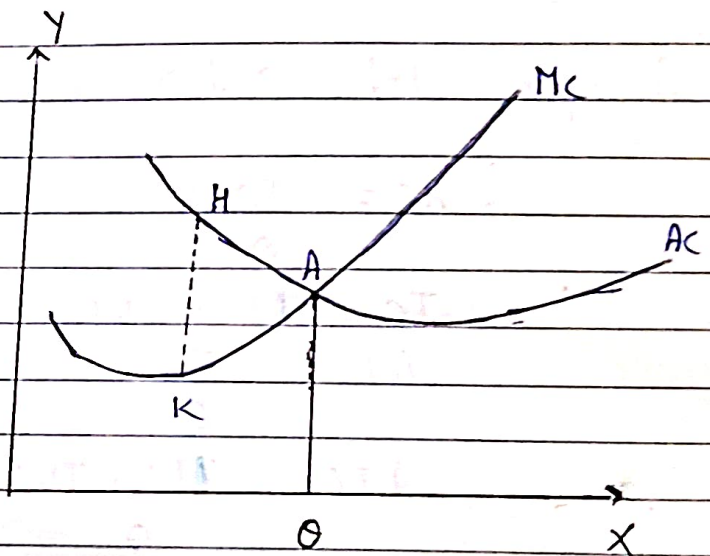
\* MC depends on Variable Cost, it does not depend on fixed Cost.

$$MC = \frac{\Delta TC}{\Delta \theta} = \frac{\Delta TVC}{\Delta \theta}$$

Relation Between AC and MC  $\Rightarrow$

(i)  $AC = \frac{TC}{\theta}$

$$MC = \frac{\Delta TC}{\Delta \theta}$$



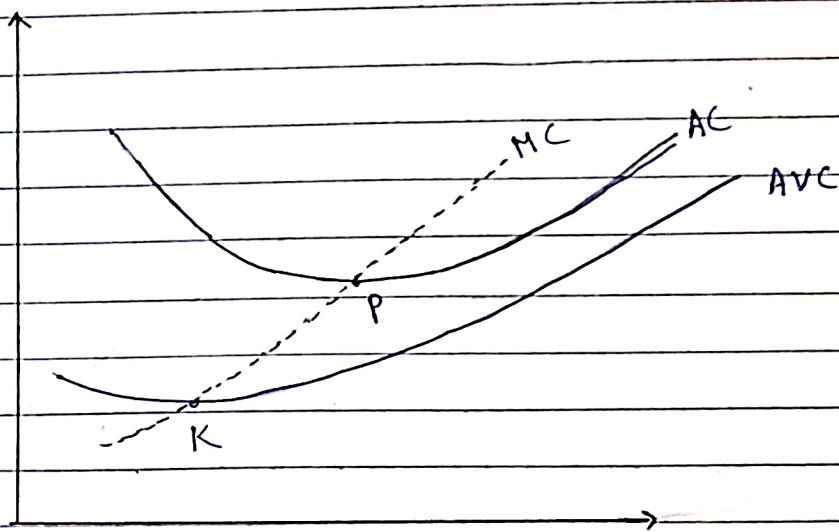
(ii) In begin when AC curve falls then MC curve falls at a limit but after a situation MC curve start to increase althouth AC curve continue falls

\* MC always less than AC in the situation of decreasing AC

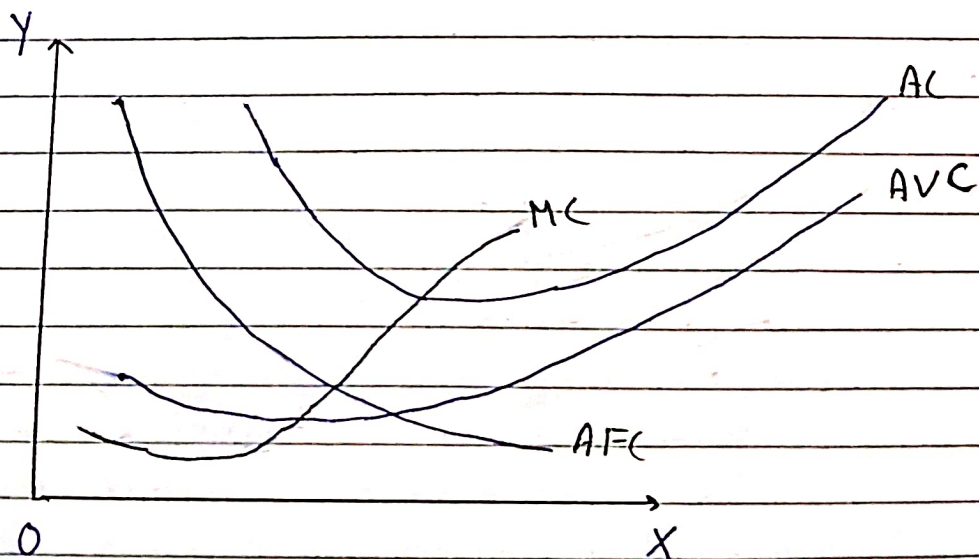
(iii) When AC is minimum then MC curve cuts AC curve from below it means minimum AC is equal to MC.

(iv) When AC curve increase then MC curve is above to AC and as well as MC curve increase more than AC curve.

Relation of MC Curve with AVC curve  $\Rightarrow$



Diagrammatical Representation of AFC, AVC, MC and AC Curves Simultaneously  $\Rightarrow$



## Concept of Revenue

1. Total Revenue  $\Rightarrow$  It is total amount which is received by selling all units

$$TR = P \times Q$$

where P denotes price  
Q denotes quantity

Average revenue  $\Rightarrow$

$$AR = \frac{TR}{Q}$$

$$AR = \frac{P \times Q}{Q}$$

$$AR = P (\text{Price})$$

Marginal Revenue  $\Rightarrow$

$$MR = \frac{\Delta TR}{\Delta Q}$$

$$MR = TR_n - TR_{(n-1)}$$

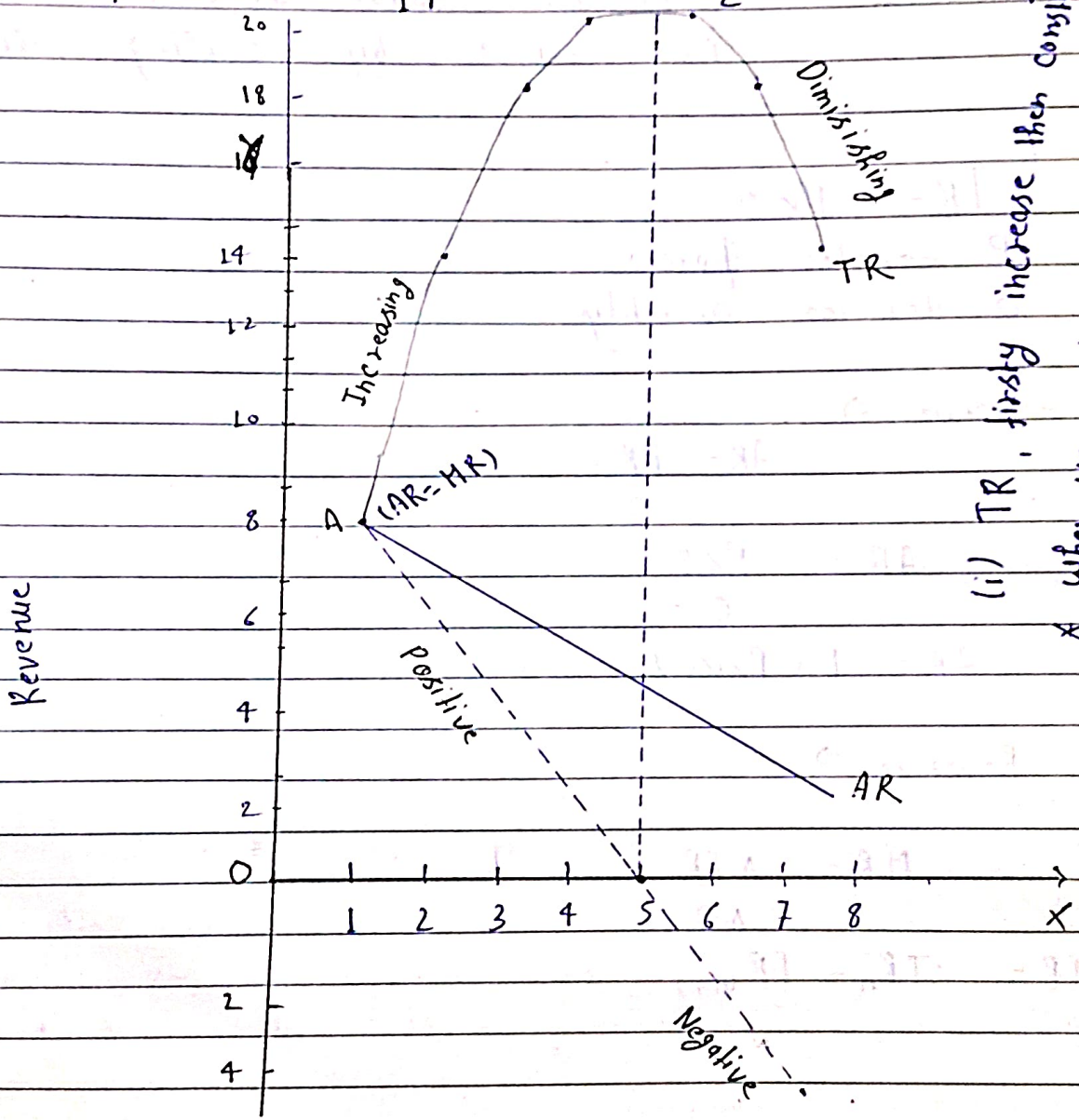
P	Q	TR	AR	MR
9	0	0	—	—
8	1	8	8	8
7	2	14	7	6
6	3	18	6	4
5	4	20	5	2
4	5	20	4	0
3	6	18	3	-2
2	7	14	2	-4

start diminishing

after that

TR will increase

TR will diminish



(ii) TR, firstly increase then constant

when MR is positive → TR will increase

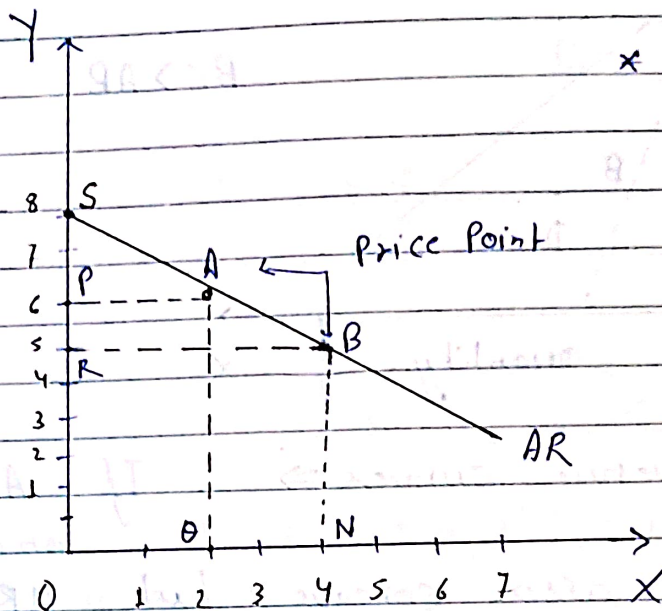
MR is 0, TR will constant

MR is negative, TR will diminish

\* \* \*

Quantity

What does the AR curve tell  $\Rightarrow$



AO denotes Price  
 \* On the S Point quantity is 0 it denotes if price will be higher then no quantity sell

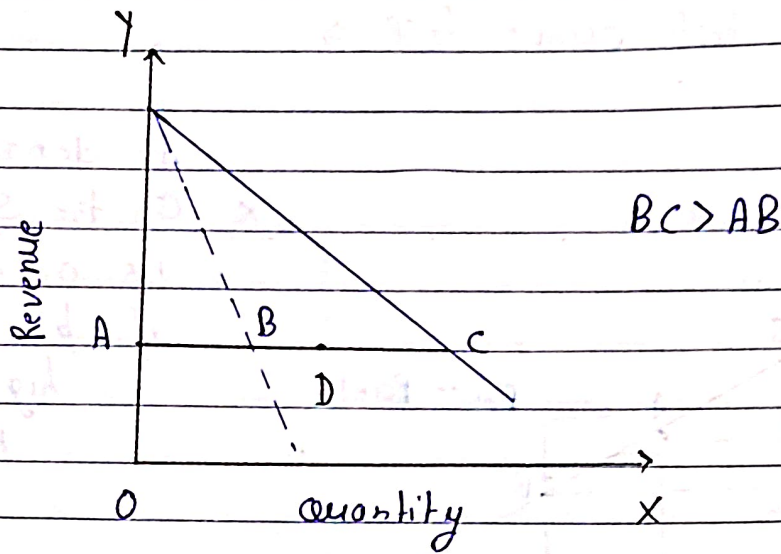
Relation between AR and MR curve

(1) Both are based on TR

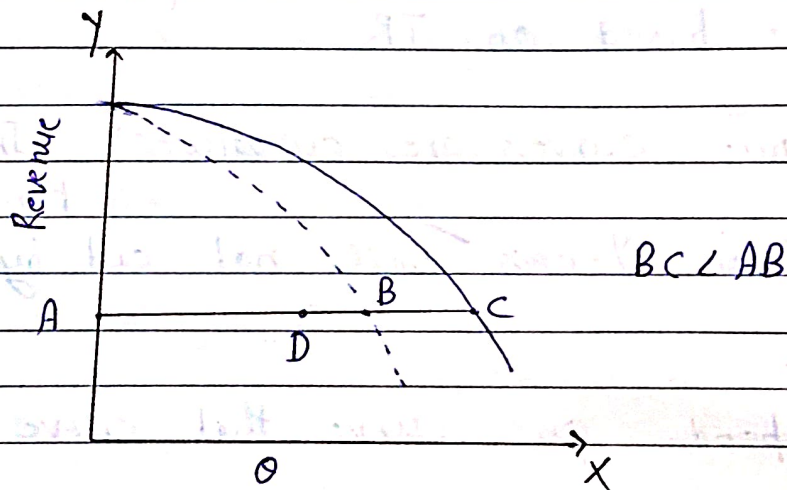
2. If revenue curves are curvature  $\rightarrow$  In this situation Perpendicular on AR curve from Y-axis will not cut by MR curve in center.

It is depend on curve that curve is convex or concave.

(i) Convex revenue curves  $\Rightarrow$  If AR curve is convex for then MR curve is also convex but MR curve cut more than half way to the AR curve of perpendicular on AR curve from Y-axis

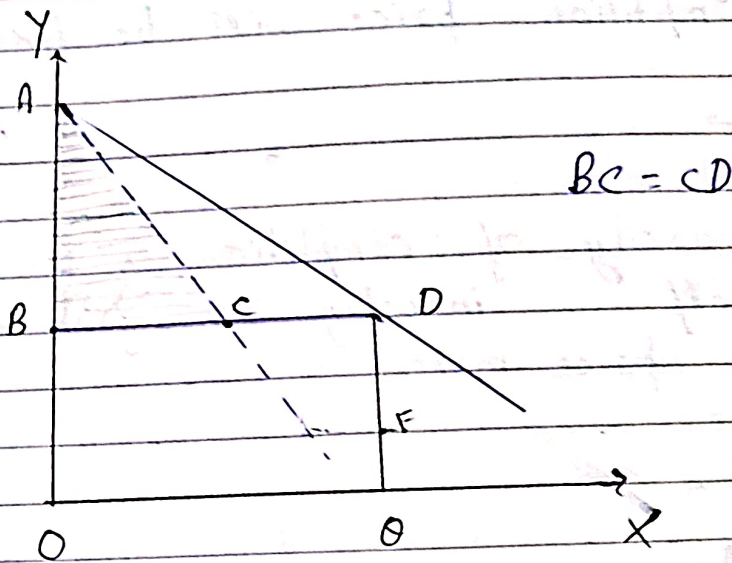


(ii) Concave Revenue curves  $\Rightarrow$  If AR curve is concave for then MR curve is also concave but MR curve will cut less than half way to the AR-curve of perpendicular on AR curve from Y-axis.



3. If both are falling straight lines  $\Rightarrow$

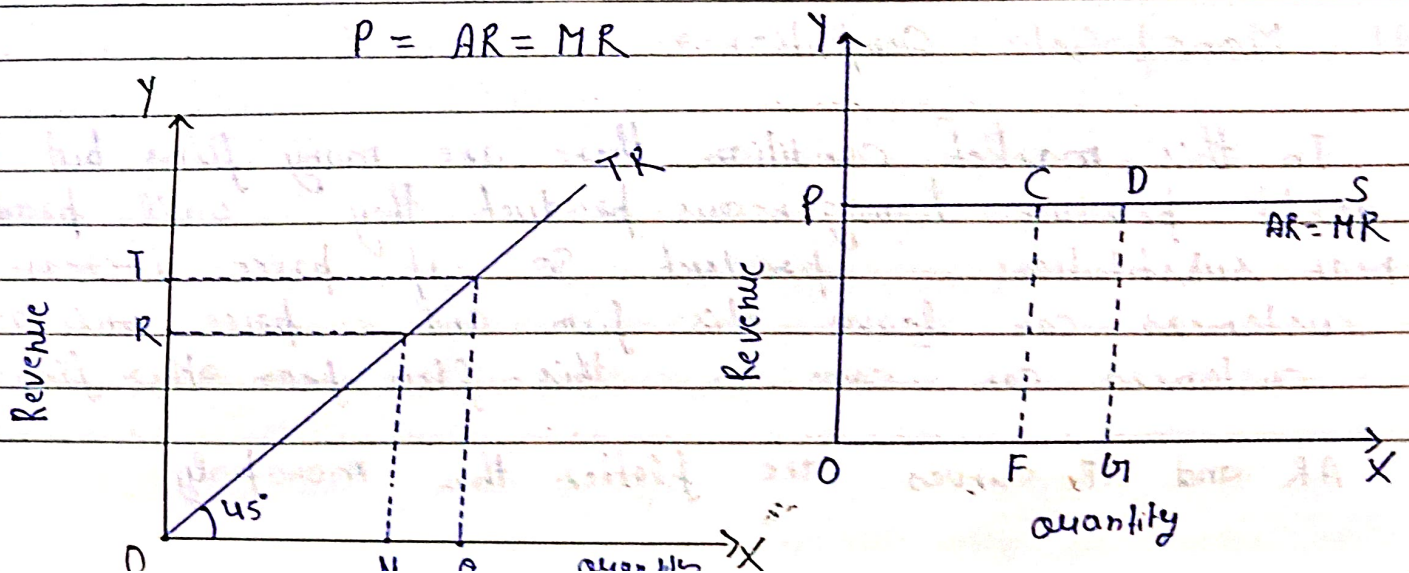
In this case situation rate of falling of MR curve is double than AR curve. It means MR curve will cut in center of perpendicular on AR curve from Y-axis.



Comparative position of AR and MR curves under different market conditions →

(i) Perfect Competition →

P	Q	TR	AR	MR
5	0	0	—	—
5	1	5	5	5
5	2	10	5	5
5	3	15	5	5
5	4	20	5	5

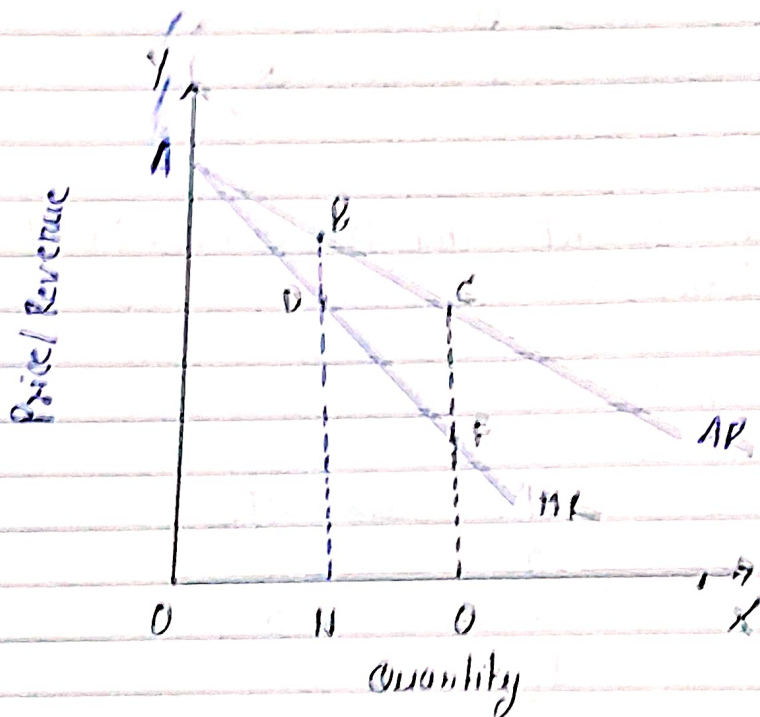


\* Firm is price taker.

\* In perfect competition price will be fixed by industry

(ii) Monopoly  $\rightarrow$

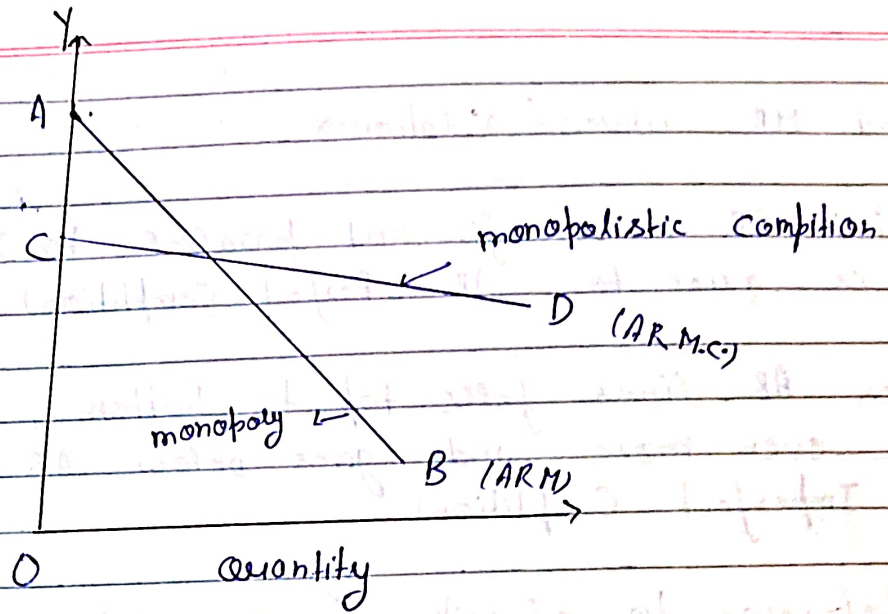
- \* Perfect scarcity of competition in the monopoly.
- \* Firm is itself industry so firm will fix price
- \* Firm is price maker.



(iii) Imperfect Competition  $\rightarrow$

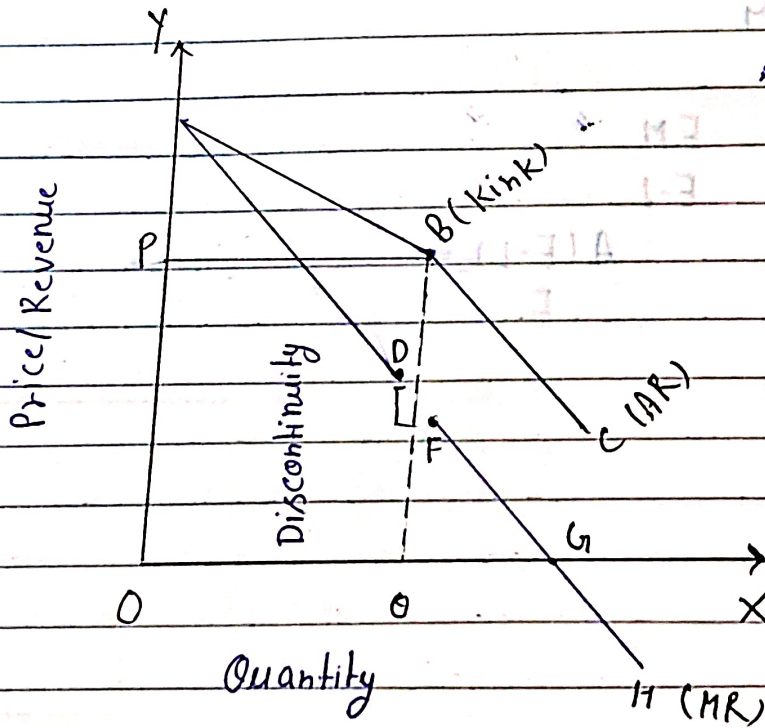
(A) Monopolistic Competition  $\rightarrow$

- \* In this market condition there are many firms but they don't produce homogeneous product they will produce near substitutions product. So if price increase customers can leave this firm and price will decrease.
- \* customers can come in this firm from other firm.
- \* AR and MR curves are flatter than monopoly.



\* AR, M Y-axis की ओर  
 Steeper  
 (अधिक ढलान वाला है)

Oligopoly →



\* AR under Monopolistic  
 Compl. flatter है  
 Y-axis से दूर  
 जाता है