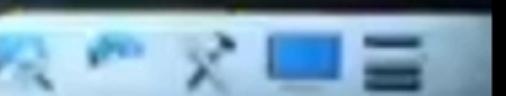
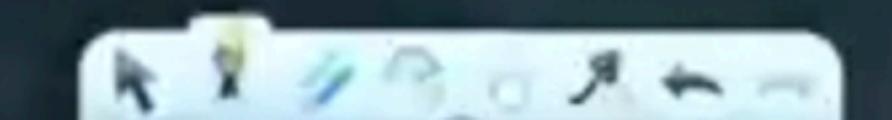


# Chapter Name: PRODUCER EQUILIBRIUM



## Producer Equilibrium

Profit Maximization

Producer Equilibrium is a situation when producer gets maximum profits.

Normal Profit, Abnormal Profit / Extra - Normal Profits  
Losses / Sub - Normal Profits

### 1. Normal Profit :

$$TR = TC$$

or

$$AR = AC$$

## 2. Abnormal Profits / Extra - Normal Profits

$TR > TC$

Or

$AR > AC$

## 3. Sub - Normal Profits / Losses

$TR < TC$

Or

$AR < AC$



## Conditions of MR – MC Approach

According to MR – MC Approaches, the producer will be in Equilibrium when the following conditions get satisfied:

- i.  $MR = MC$
  - ii.  $MC$  must be rising.

If  $MR \neq MC$ , then it is a violation of 1<sup>st</sup> condition. There can arise two situations:

**I. MR > MC :**

In this situation, the additional revenues of the firm is greater than additional cost. The profit of the firm is continuous increasing. So, the producer will continuous to produce more of output.

**II. MR < MC:**

In this situation, the additional cost of the firm is more then the additional revenues of the firm. Here, the firm is getting losses. So, the firm will reduce the production of the commodity.

∴ MR must be equal to MC

**When MC is not rising**, then it is also the violation of second condition. In this situation, the marginal cost of the firm is continuous declining & the profit is continuously increasing So, the firm will continuous to produce more of output.



## Table:

Output	MR	MC
1	10	11
2	10	10
3	10	9
4	10	8
5	10	9
6	10	10
7	10	11

It is clear from the table that  
Therefore, the producer will

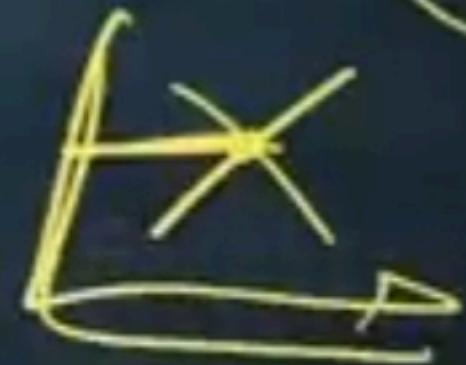
At 6<sup>th</sup> units of output, the  
conditions get satisfied i.e.

i.  $MR = MC$

MC is also rising

Perfect Comp

Price  
constant



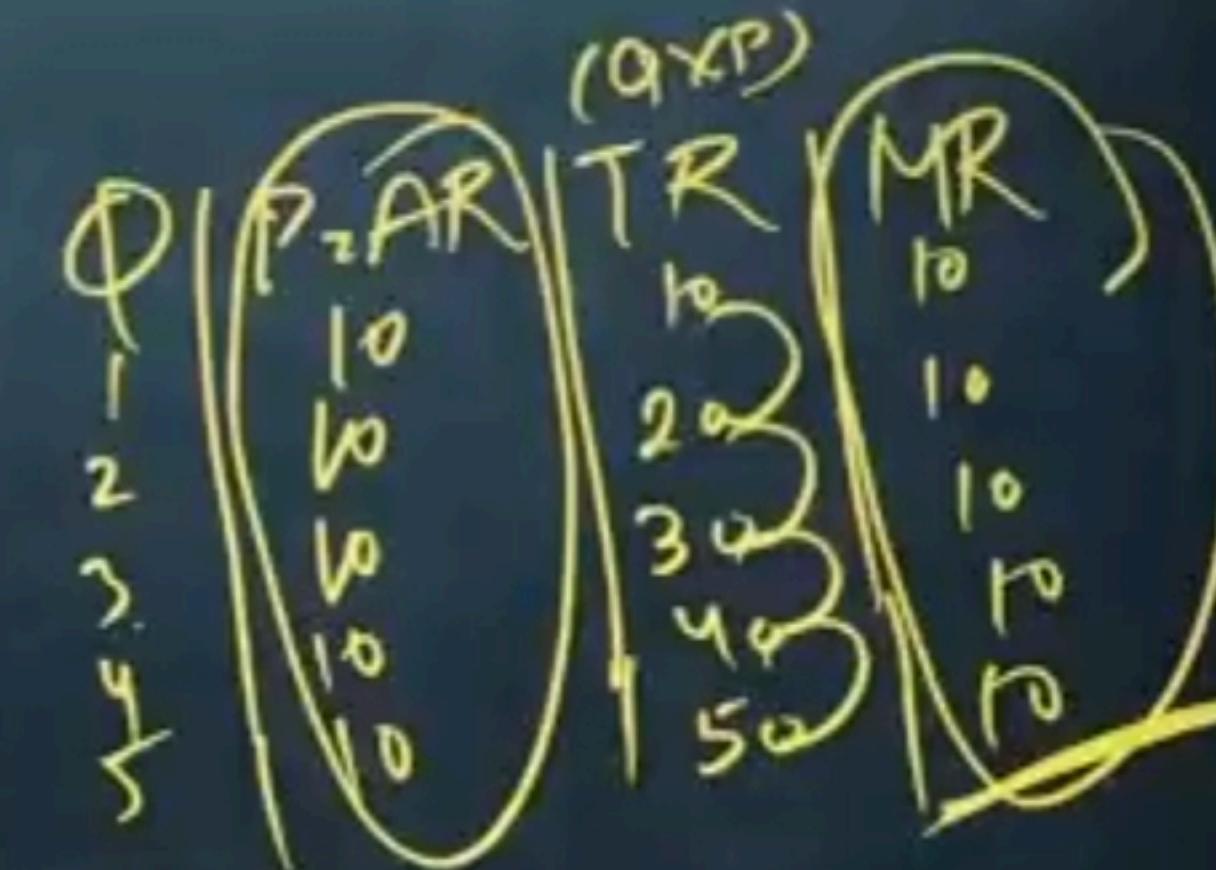
output,  $MR = MC$  but MC is falling.  
Therefore, the producer will

equilibrium as here both the

## Table:



Output	MR	MC
1	10	11
2	10	10
3	10	9
4	10	8
5	10	9
6	10	11
7	10	



It is clear from the table that the product of two negative numbers is positive.

At 6<sup>th</sup> units of output  
conditions get satisfied.

- $$\text{i. } MR = MC$$

MC is also ri

ts of output,  $MR = MC$  but  $MC$  is falling.  
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**Table:**

Output	MR	MC
1	10	11
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7	10	11

$$MR = MC$$

MC must be rising

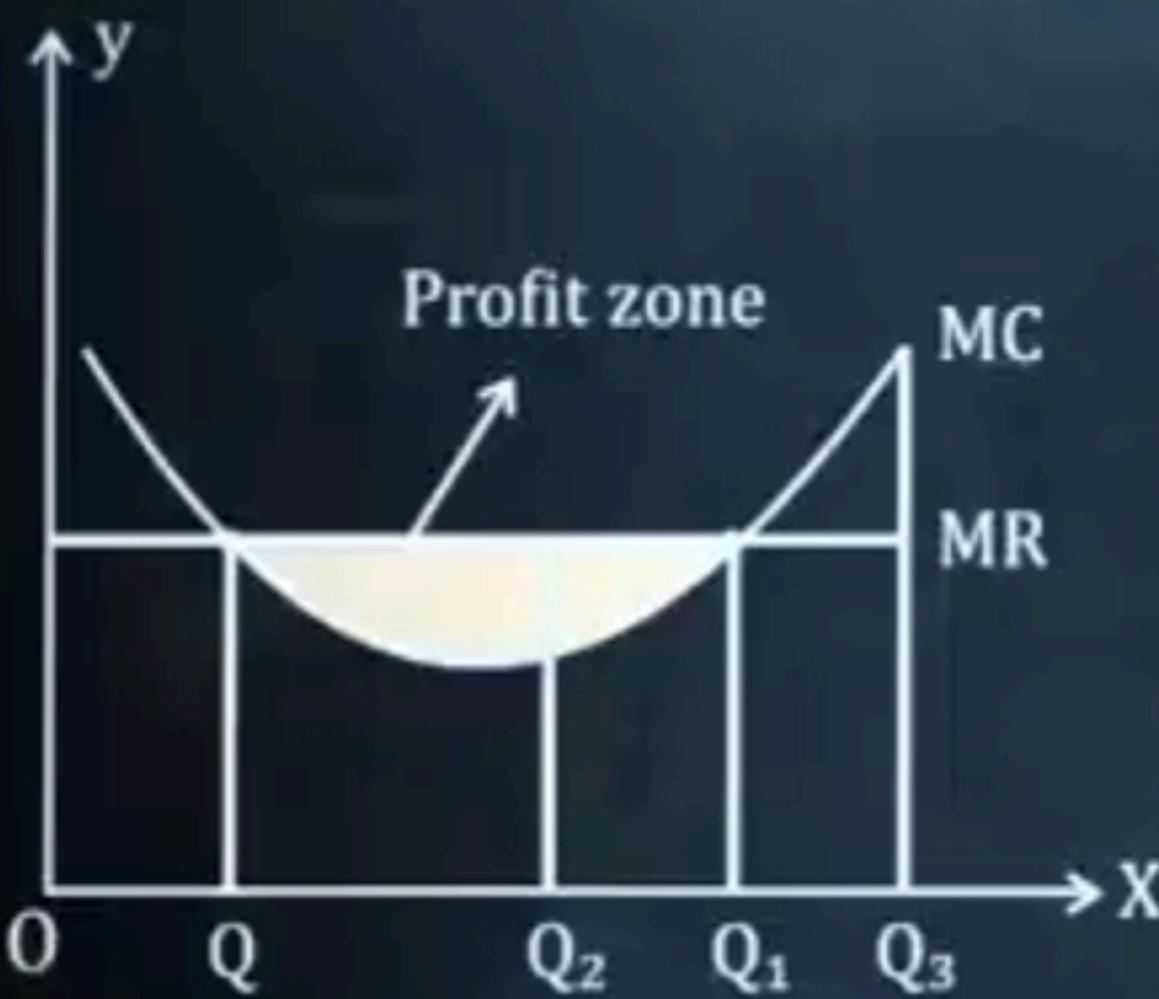
MR = MC ✓  
MC ↑

It is clear from the table that at 2<sup>nd</sup> units of output,  $MR = MC$  but MC is falling. Therefore, the producer will not be in equilibrium.

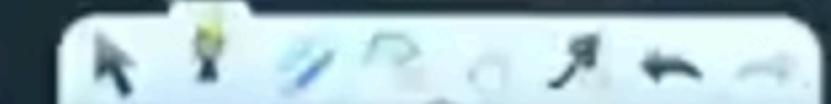
At 6<sup>th</sup> units of output, the producer will be in equilibrium as here both the conditions get satisfied i.e.,

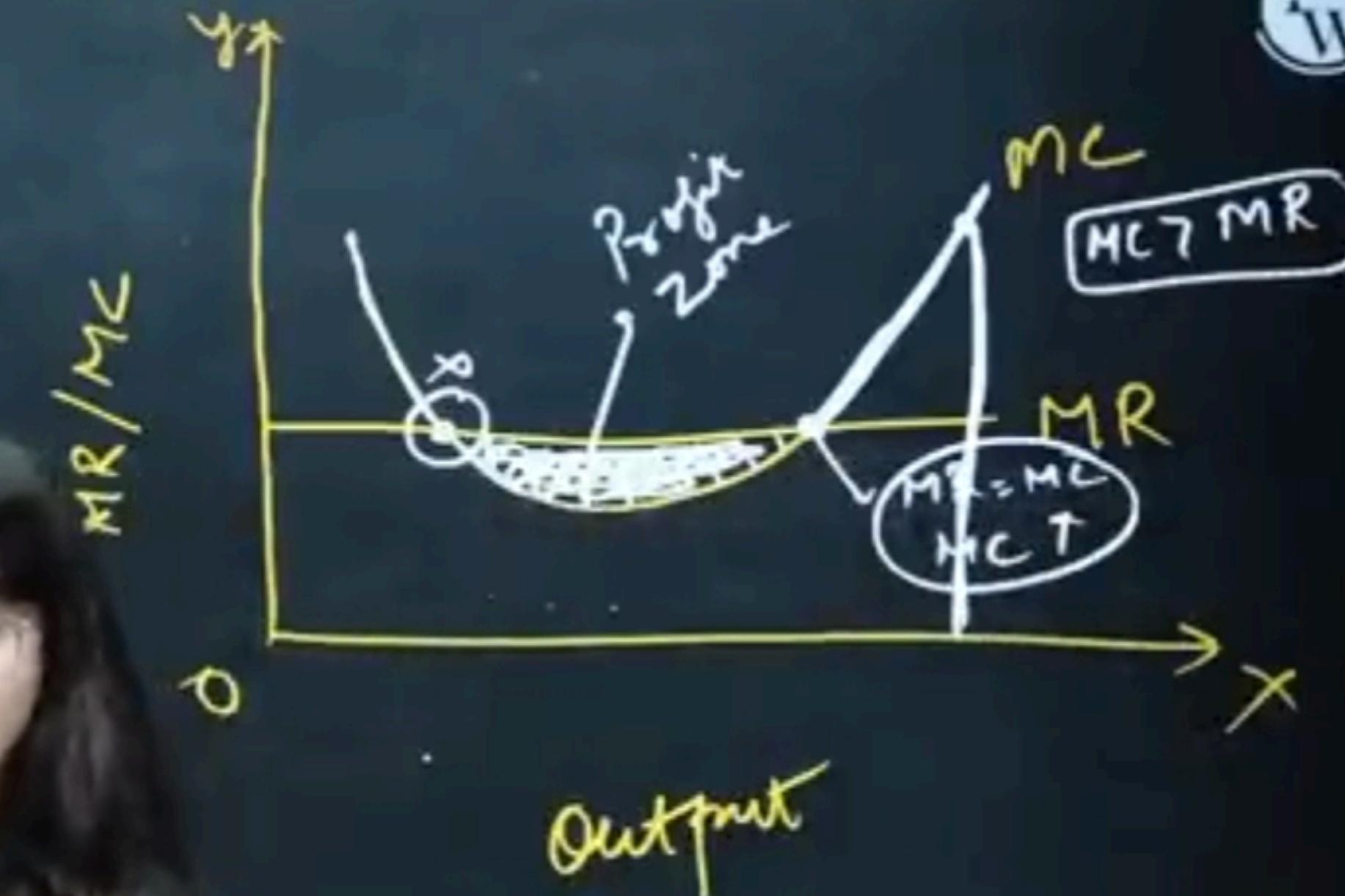
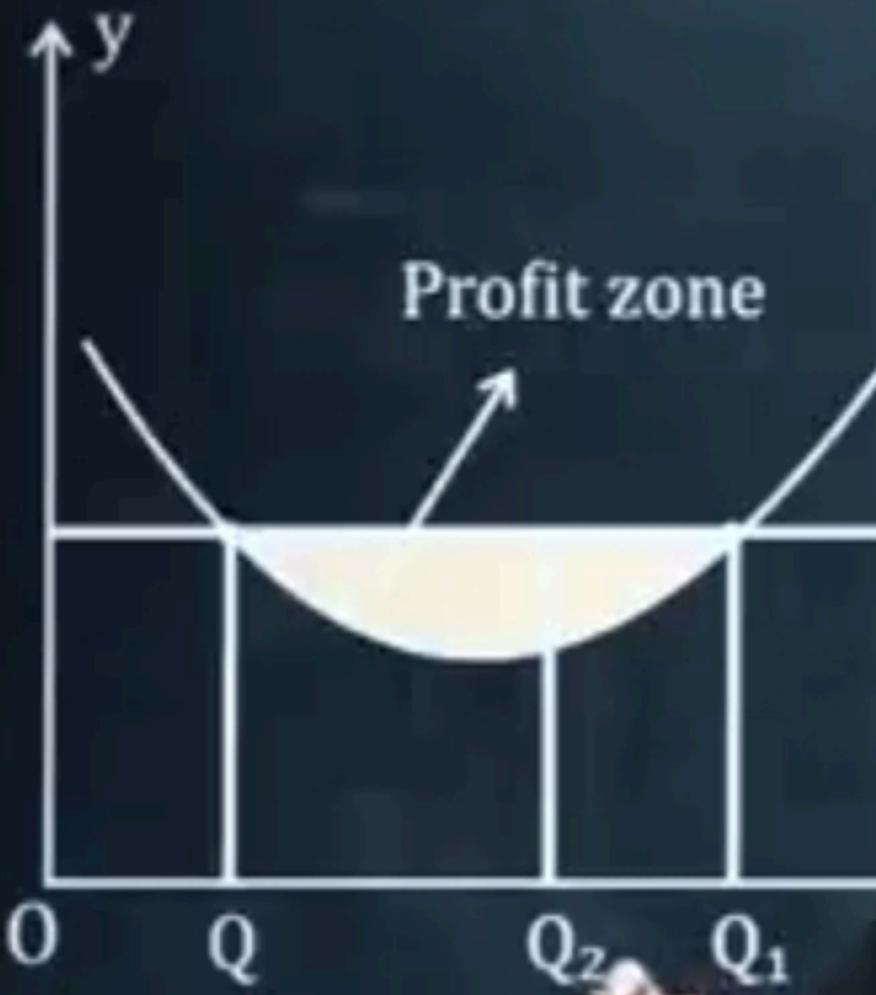
- i.  $MR = MC$  ✓
- ii. MC is also rising ✓

## Diagram



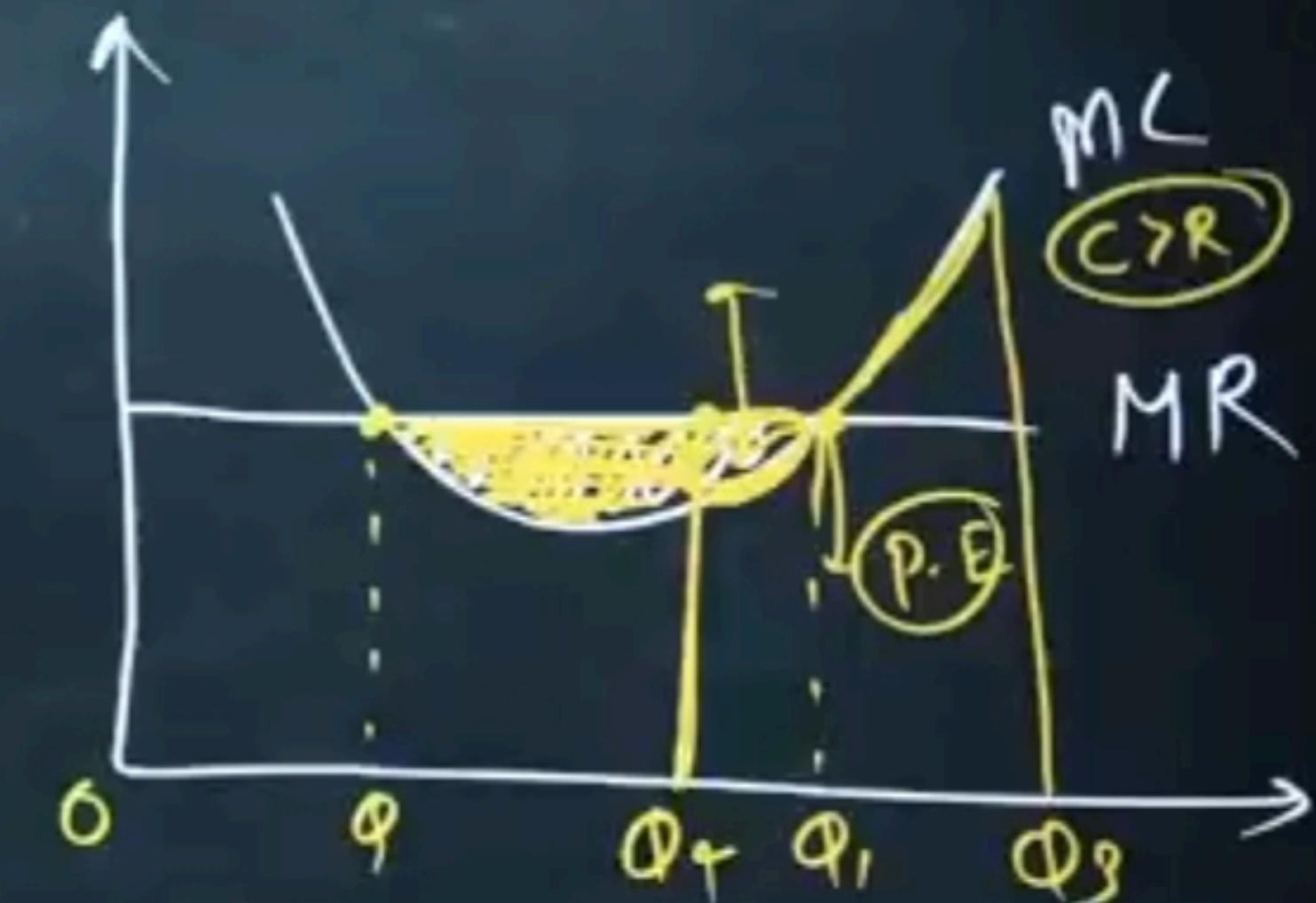
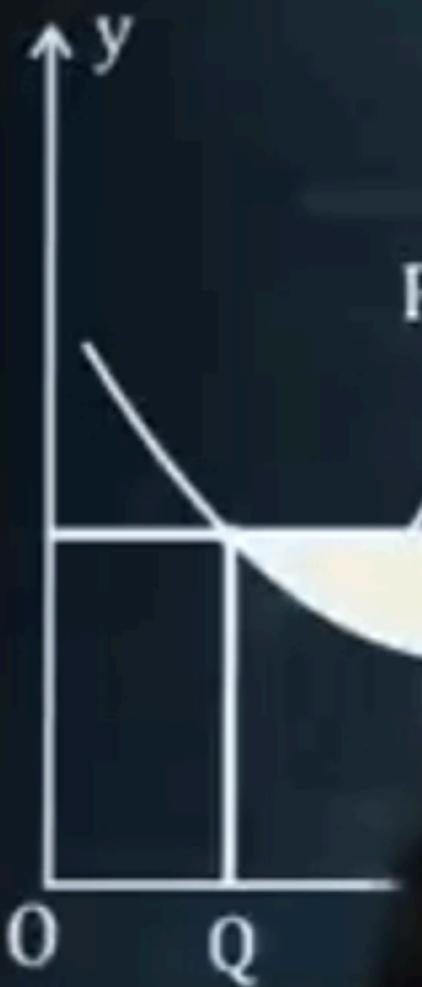
- It is clear from the diagram that at  $OQ$  units of output,  $MR = MC$  but  $MC$  is falling.  
∴ the producer will not get equilibrium at this level of output.



Diagram

- It is clear from the graph that  $MR$  is falling.
- $\therefore$  the producer

units of output,  $MR = MC$  but  $MC$  is falling at this level of output.

Diagram

- It is fall
- hat at units of output,  $MR = MC$  but  $MC$  is  
at this level of output.

- At the  $OQ_1$  level of output, both the condition of  $MR - MC$  approach get satisfied as here
  - $MR = MC$
  - $MC$  is also rising

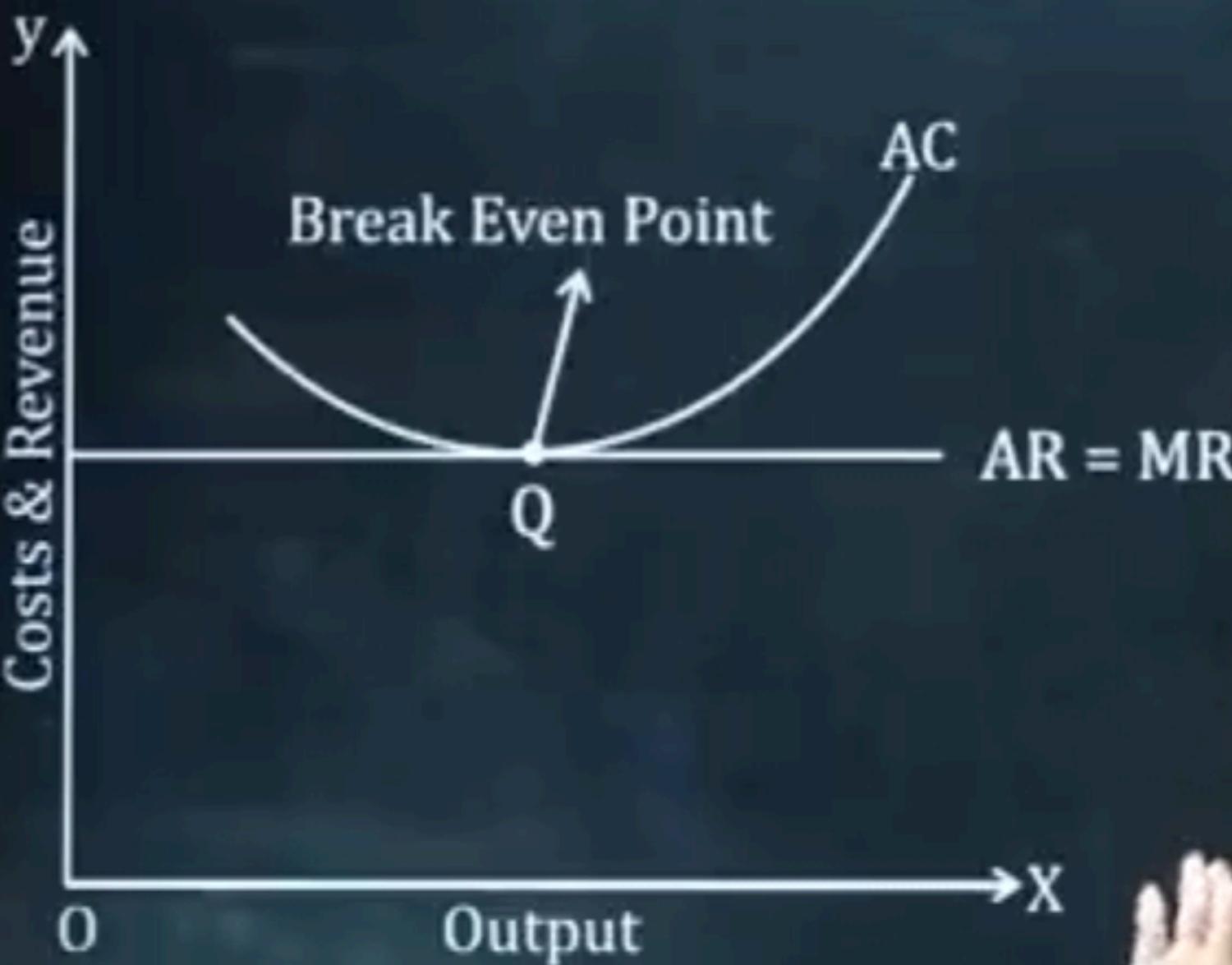
So, the producer will be in equilibrium at  $OQ_1$  level of output as here, the producer is also able to get entire Profit Zone.

- If the producer produces less output than  $OQ_1$  i.e.,  $OQ_2$  units of output, then he will not be able to get entire profit zone.
- If the producer produces more output than  $OQ_1$  i.e.,  $OQ_3$  units of output, then he will have to face losses.
- ∴ The producer will stop production at  $OQ_1$  units of output as here both the conditions are satisfied & the producer can be able to cover the entire Profit Zone.

## Break - Even Point



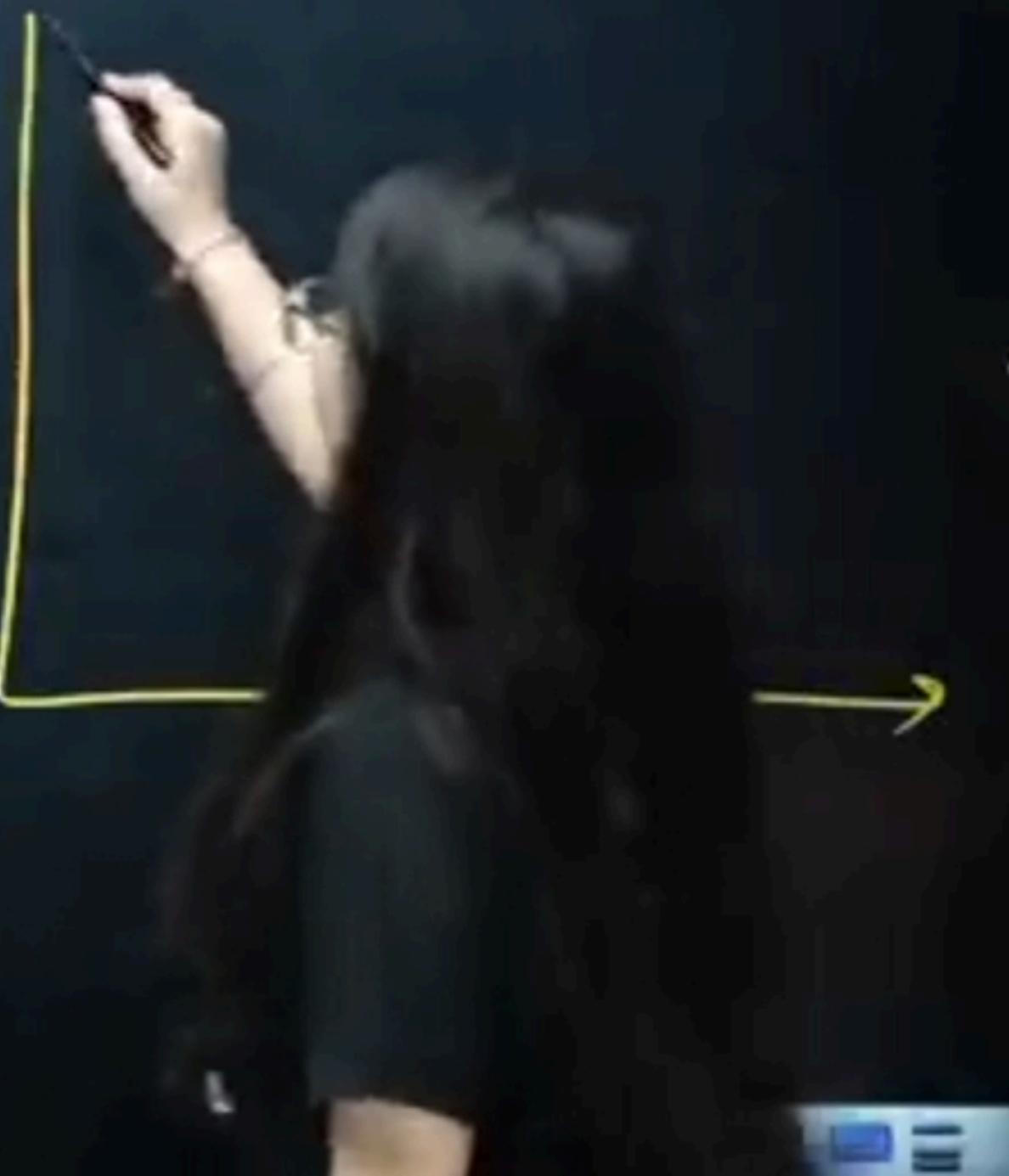
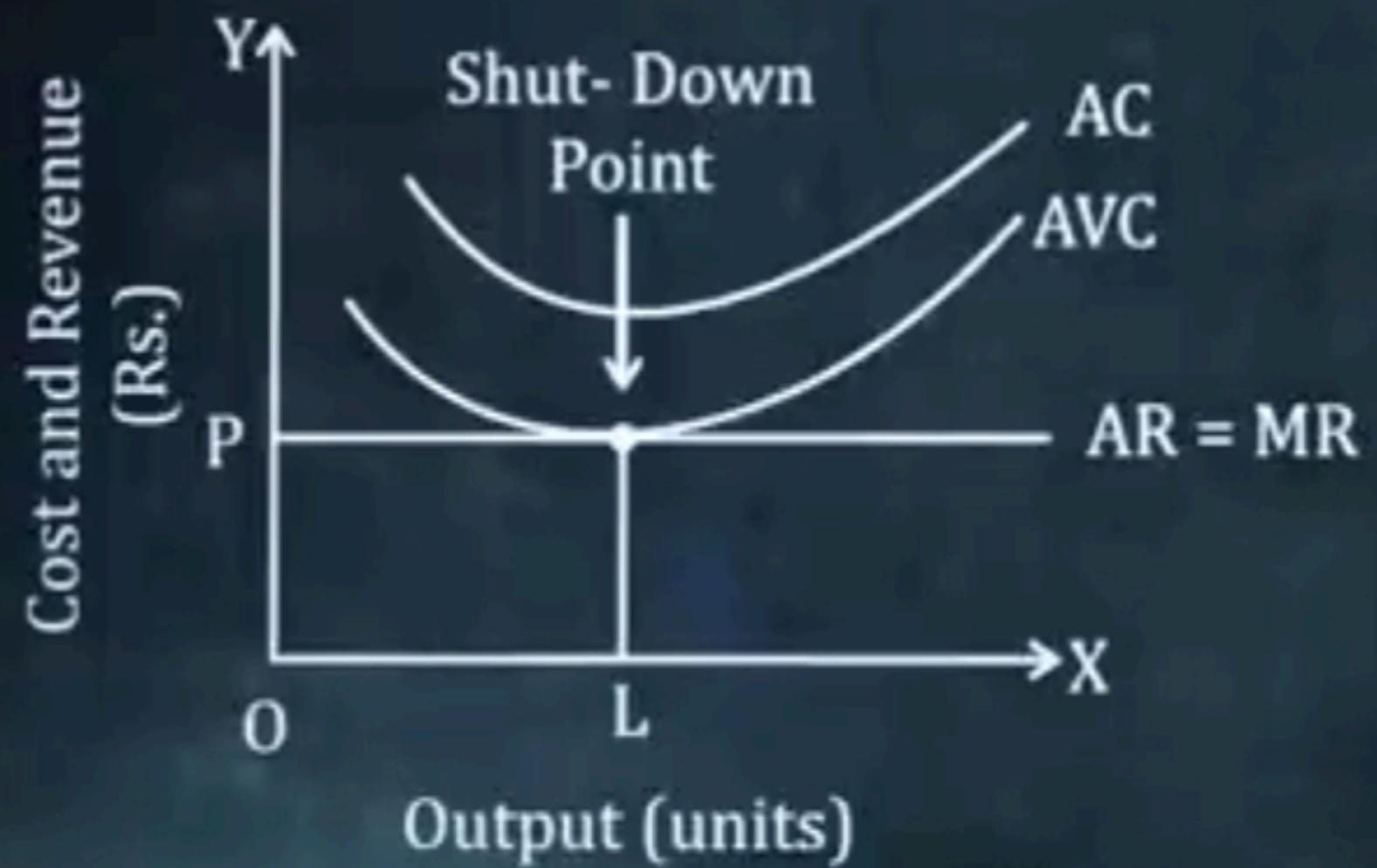
Break - Even Point occurs when a firm is able to cover all its costs.



## Shut - Down Point

Shut-Down Point occurs when a firm is just able to cover its variable costs only.

The firm is not able to cover its Fixed Cost.

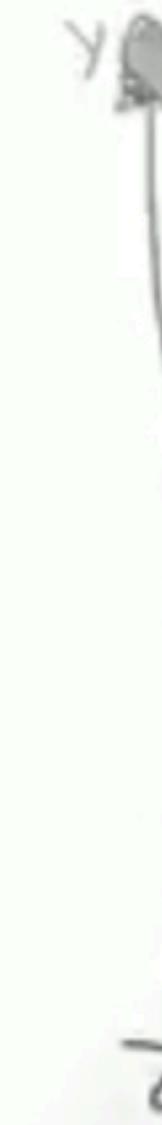


## Equilibrium of A firm

### 1) Total Revenue and total Cost [Approach]

A firm is in equilibrium when

- 1) Distance b/w TR and TC should be maximum.
- 2) Total Revenue > Total Cost



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Perfect comp



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