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DEPARTMENT: EDUCATION
MPUMALANGA PROVINCE

ECONOMICS NOTES
TOPIC 5: PERFECT MARKET
GRADE: 12
YEAR: 2024

TOPIC 5: PERFECT MARKET: PERFECT COMPETITION

- Perfect competition is a theoretical market structure in which the competition is at the greatest possible level.

CHARACTERISTICS/ MARKET STRUCTURE (POSSIBLE ESSAY)

- **Number of businesses**

- There is large number of buyers and sellers that an individual participant is insignificant (too small) in relation to the market.
- This means no individual buyer or seller can influence the market price.
- All sellers are price takers as they must sell at the market price.

- **Nature of the product**

- The product sold are homogeneous, meaning they are identical in regard to quality, size or shape.
- It therefore does not matter from whom the consumer buy the product as they cannot be distinguishable (differentiated).

- **Market entry**

- There is freedom to enter into and exit from the market. This means the market is fully accessible to buyers and sellers.
- There are no legal, financial, technological or any other barriers.

- **Information**

- Participants have full information (perfect knowledge) about the market conditions.
- Buyers have complete knowledge about price, quality and availability of products in the market.
- For example, if one business can raise its price above the market price, buyers will immediately know, and no one will buy.

- **Control over price**

- Sellers have no control over price as such they are called price takers.
- They take the price that is set by the market and charge it for their products.

- **Collusion**

- There is no collusion between sellers. That is every seller sells independently of others.

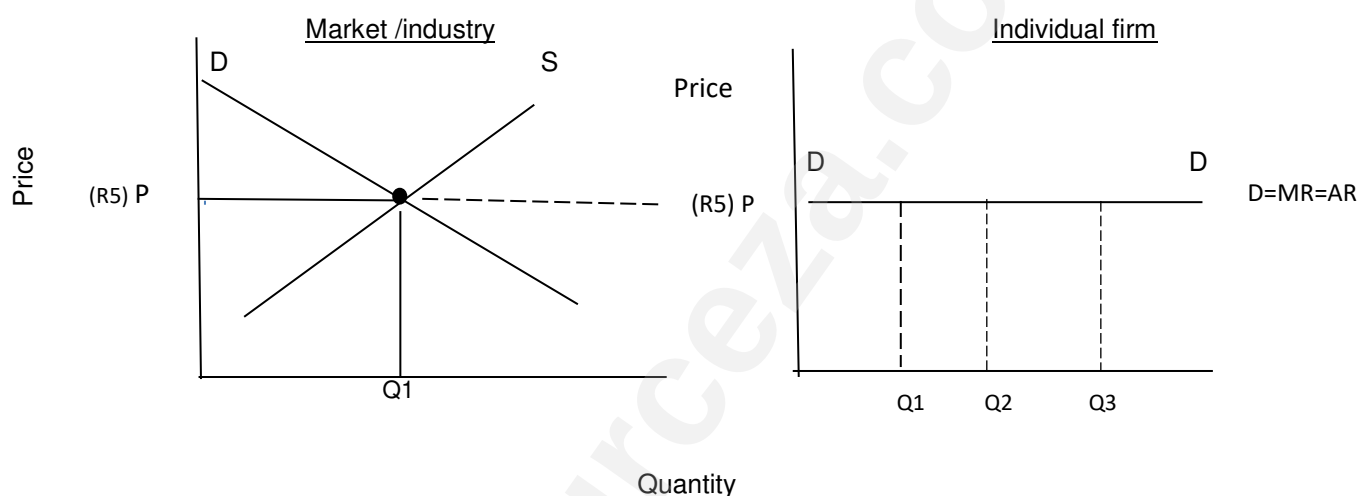
- **Profit**

- The firm can make economic profit only in the short run.
- In the long run more firms will enter the market and only normal profit is possible.

THE INDIVIDUAL BUSINESS AND THE INDUSTRY

- An individual business is a firm that produces a particular product e.g. maize.
- An industry consists of all individual businesses that produce the same product e.g. maize industry, tomato industry.
- In a perfectly competitive market the price that the individual firm charges for its products is set by the market / industry. That is why individual producers are called price takers.
- The market price is the price at which the industry demand is equal to supply.

PRICE FORMATION IN THE PERFECT MARKET



- The market / industry equilibrium price is P (R5) and it is the price at which demand DD is equal to supply SS. The equilibrium quantity is Q1.
- The market equilibrium price P (R5) is then taken by the individual firm as the price for its products.
- The individual firm's production is so small that it cannot influence the market, therefore it has to accept the market price (R5).
- At this price P (R5), the individual firm can produce and sell various quantities such as Q1, Q2 and Q3.
- Since the individual business is a price taker, its demand curve is a horizontal (perfectly elastic) line.
- For every unit of a product sold, the business receives the same price; as such the Average Revenue (AR) that the firm receives is also the same as the price.
- The revenue for selling additional unit of the product (MR) will also give the same amount as the price (AR)
- Therefore, the horizontal demand curve also represents the AR and the MR curves.
- Average revenue is the price paid per unit of the product.

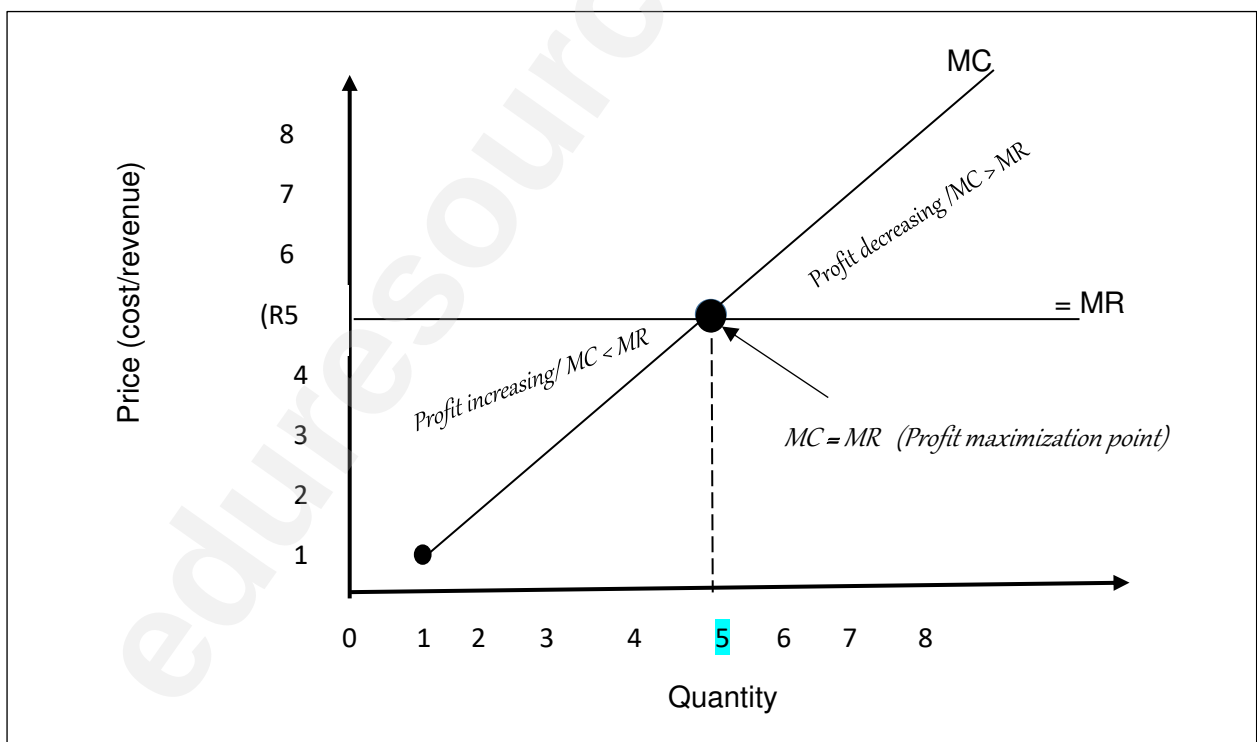
Revenue table to show that $P = AR = MR$ for the individual firm

Quantity (Q)	Price (P)	TR (P × Q)	AR (TR ÷ Q)	MR (Δ TR ÷ Δ Q)
0	R5	-	-	-
1	R5	R5	R5	R5
2	R5	R10	R5	R5
3	R5	R15	R5	R5
4	R5	R20	R5	R5
5	R5	R25	R5	R5

PROFIT MAXIMISATION APPROACHES

An individual firm in the perfect market can maximise profit (make highest profit) where $MC = MR$ or where the positive difference between TR and TC is highest.

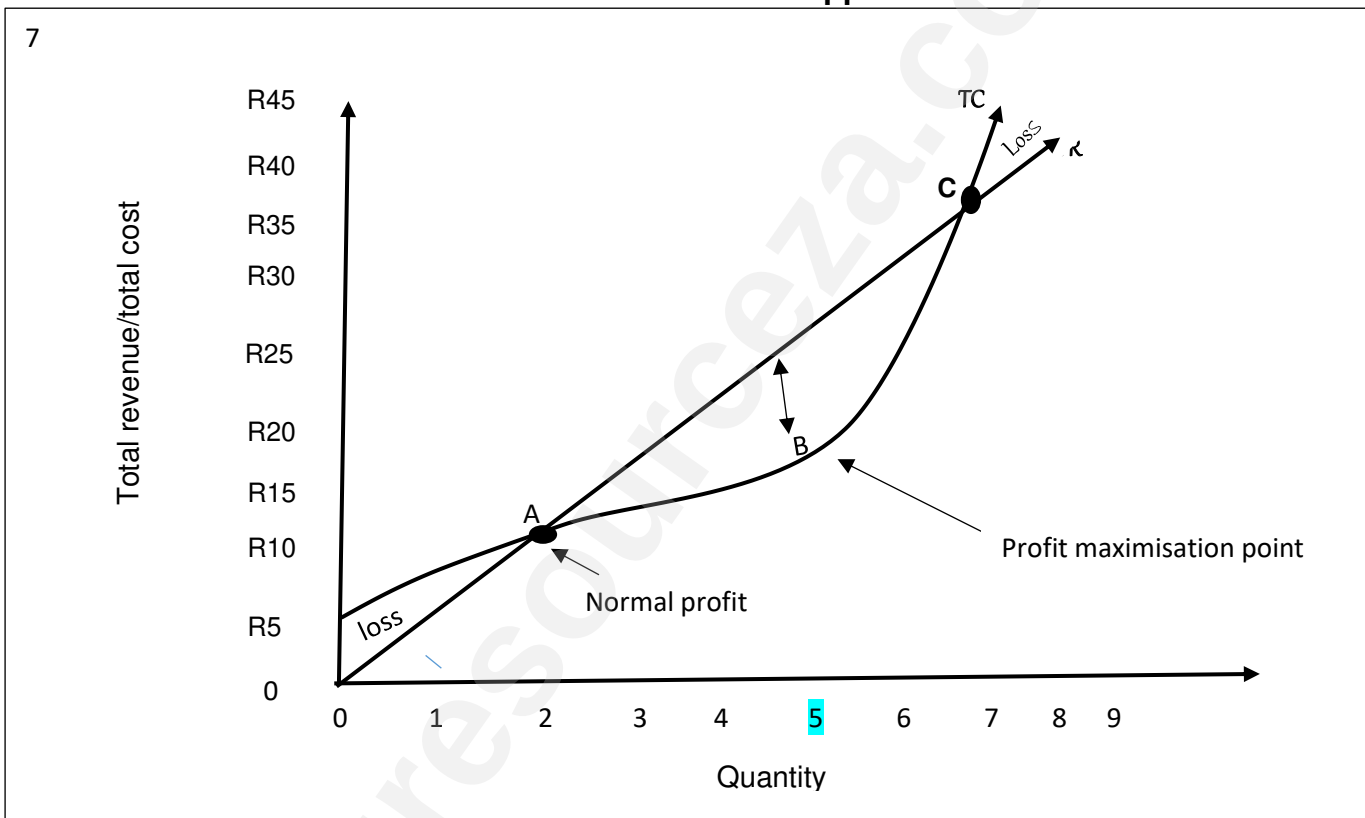
1. Marginal cost = Marginal revenue approach



- The firm makes the highest profit where $MC = MR$, which is at quantity 5.
- $MC = MR$ is referred to as **profit maximisation point**.

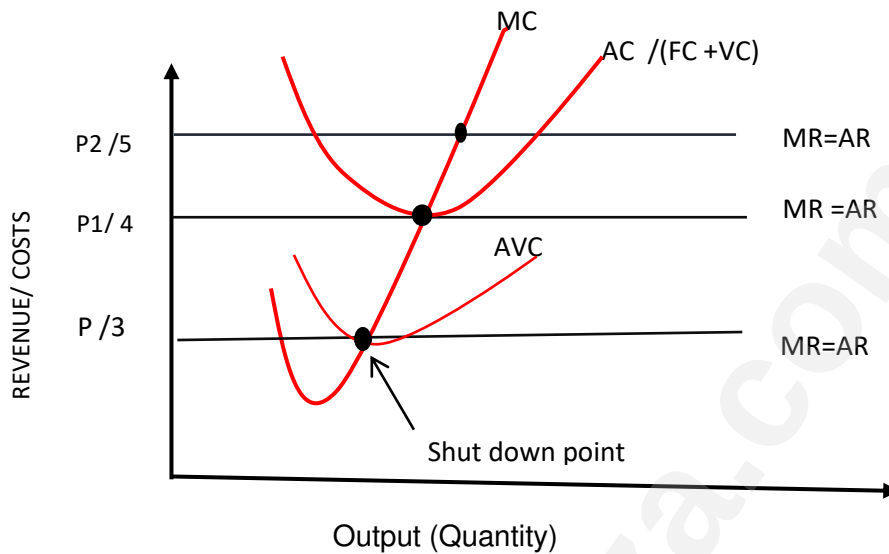
- At any quantity to the left of the profit maximisation point (e.g. 1, 2, 3 and 4), the firm's cost for producing any one additional unit is lower than the revenue received from such unit ($MC < MR$). The firm can still increase its total profit by increasing production.
- At any quantity to the right of the profit maximisation point (e.g. 5, 6, 7 and 8), the cost of producing any additional units of a product is higher than the revenue received from such unit ($MC > MR$). Therefore, any of the additional unit produced will reduce the firm's total profit because such units bring no additional profit

2. Total revenue and Total cost approach

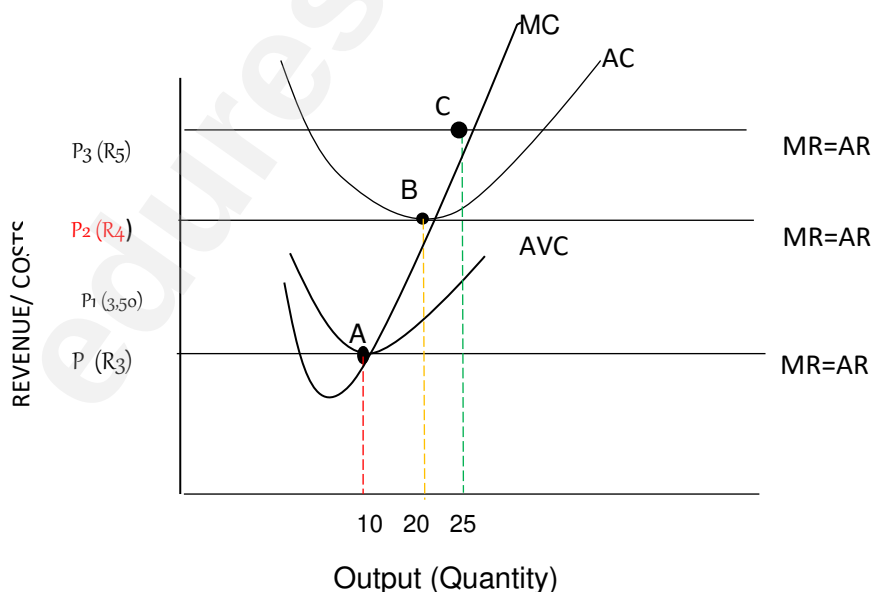


- A perfectly competitive firm **maximises profit** where the positive difference between the total revenue and total cost is the highest.
- The profit maximisation point is at B and the quantity is 5.
- At unit 2 the firm breaks even (makes **normal profit**) because $TR = TC$.
- At less than 2 unit produced, the firm makes an economic loss, so it has to increase its production to obtain a profit.
- The firm makes **economic profit** when producing between 2 and 7 units of the product, but this profit is the highest when producing 5 units. Economic profit is achieved when $TR > TC$.
- The firm break even again at quantity 7 (point C), which means a **normal profit** is made.
- When producing more than 7 units, the firm makes an **economic loss** again because $TC > TR$.

SUPPLY CURVE OF A FIRM IN A PERFECT MARKET



- The supply of the individual firm in a perfectly competitive market is determined where the **MC and AVC** curves meet (intersect)
- This is because the individual firm will **only produce when the price lies above the minimum point on the AVC curve**.
- The firm's supply curve is **the upward sloping part of the Marginal Cost (MC) curve**.
- If the market price is **equal or below Average Variable Costs (AVC)**, the firm should close /shut down. This means the shut- down point it where the $P = AVC$.



- AT point **A**, the firm must shut down because the revenue it earns from price P (R_3) can **only** cover the Variable costs of production ($P = AVC$). Example of variable costs are raw material, water & electricity, petrol, wages etc. This means

it **cannot** afford to pay for its fixed costs such as rent, salaries, insurance etc. Therefore, production cannot continue.

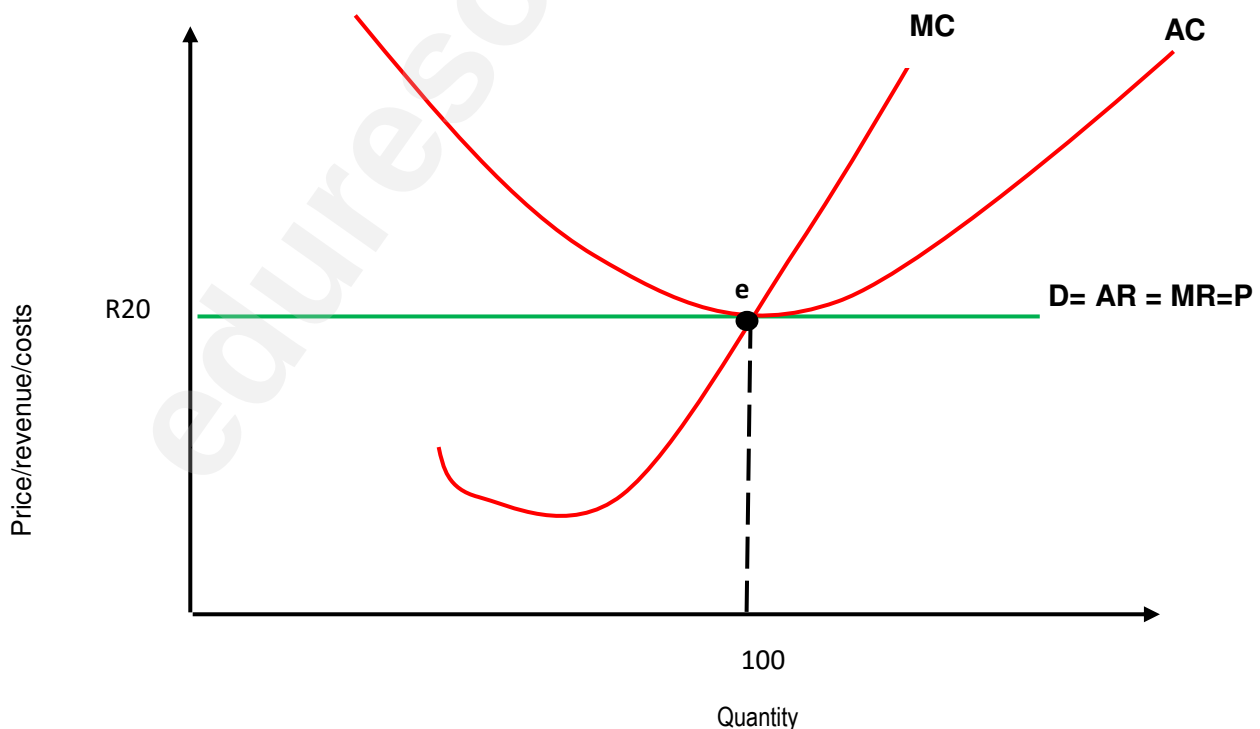
- The quantity of 10 above will not be produced since the firm will have been shut down.
- At any price above shut –down point (A) but below Point B (e.g. R3.50,) the firm can cover all its variable costs ($P > AVC$) and some of its fixed costs. The firm can operate but because the price of R3, 50 is below the Average Costs of R4, the firm makes an **economic loss**.
- AC indicate the average of total costs which are variable and fixed. Therefore, the distance between A and B represents an economic loss.
- At market price of P_2 (R4), the firm makes normal profit, because the revenue it earns from the price of R4 per item is equal to the average cost of R4 (P or $AR = AC$).
- At a market price of P_3 or R5, the firm makes economic profit because the price is higher than AC. This means, the amount it receives per unit is more than the amount spent on production. Therefore, it has extra profit left after all expenses are paid.

SHORT RUN PROFITS AND LOSSES /VARIOUS EQUILIBRIUM POSITIONS IN PERFECT MARKET (POSSIBLE ESSAY)

- In the short term a perfectly competitive firm can makes economic profit, normal profit or economic loss.

NORMAL PROFIT

- It is the minimum payment required to prevent the entrepreneur from leaving and using his/her factors of production elsewhere

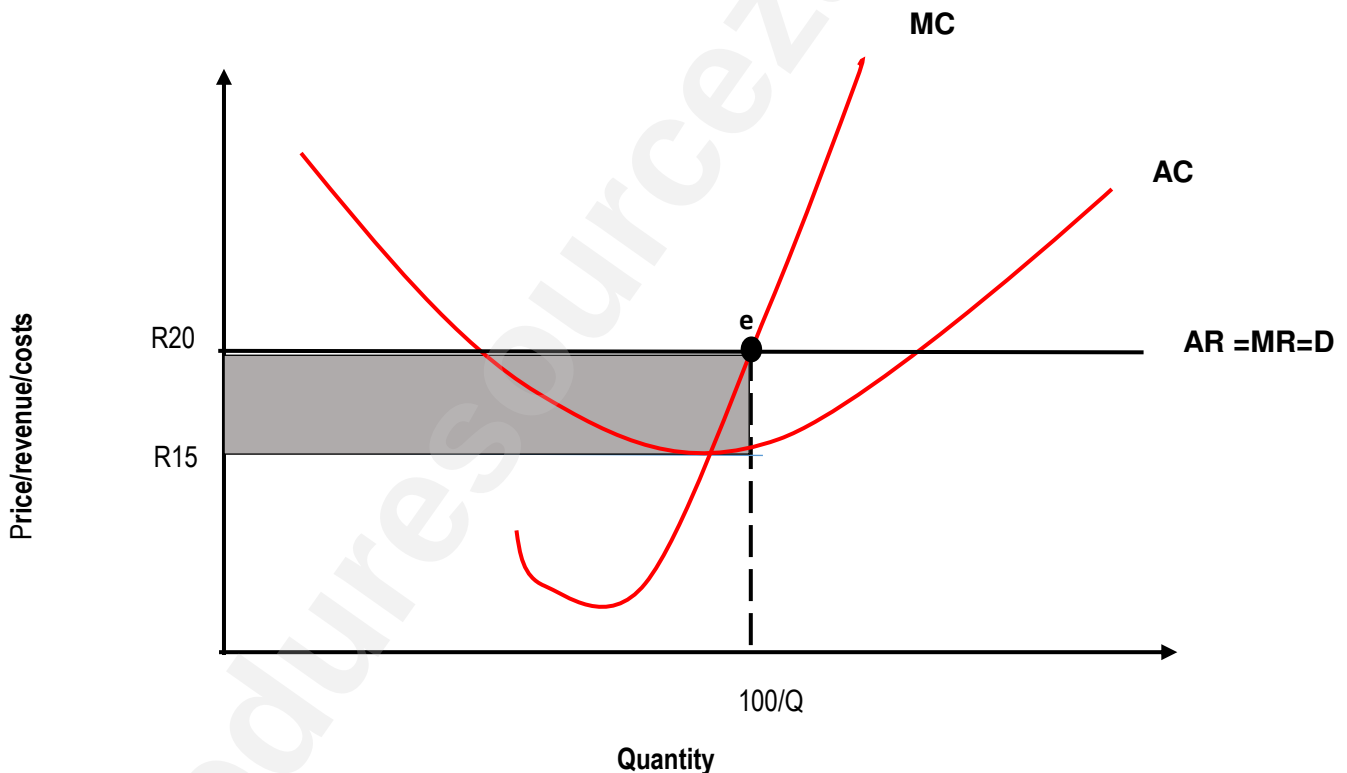


- Normal profit is the profit that the entrepreneur earns when the firm's costs are equal to its revenue.
- The firm's average cost of R20 equal to its average revenue of R20.
- Point e where $MR = MC$ is the breakeven point, and because the firm $AR = AC$, it also shows normal profit.

CALCULATIONS

$$\begin{aligned}
 \text{Normal profit} &= TR - TC \\
 &= (P \times Q) - (AC \times Q) \\
 &= (20 \times 100) - (20 \times 100) \\
 &= 2000 - 2000 \\
 &= R 0
 \end{aligned}$$

$$\text{ECONOMIC PROFIT} = TR > TC$$

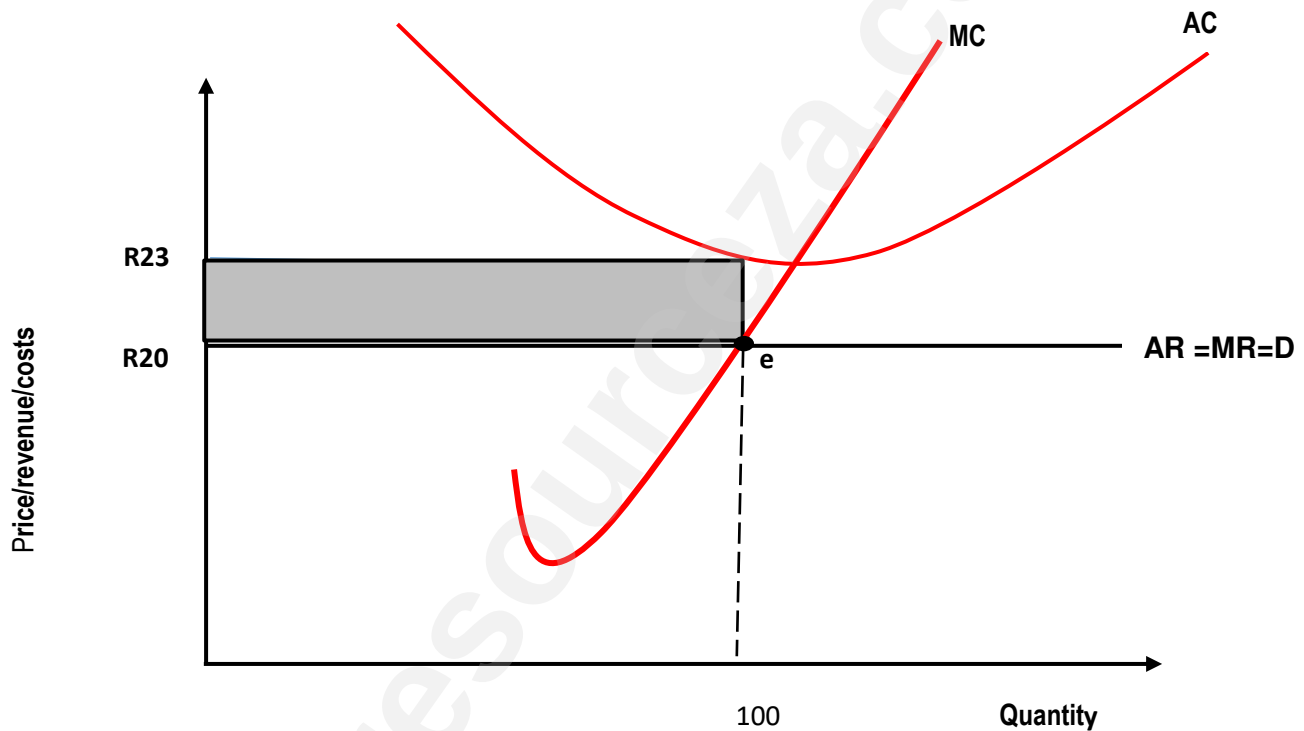


- Economic profit is the extra profit that the firm makes above normal profit.
- The firm profit maximisation point is where $MC = MR$, at point e.
- The lowest point of the AC lies below the price.
- The AR is higher than AC ($AR > AC$). At the average price of R20, the firm makes R5 profit per unit sold.
- Total costs of production are equal total revenue made ($TR = TC$)

CALCULATIONS

$$\begin{aligned}
 \text{Economic profit} &= \text{TR} - \text{TC} \\
 &= (P \times Q) - (AC \times Q) \\
 &= (20 \times 100) - (15 \times 100) \\
 &= 2000 - 1500 \\
 &= \text{R}500
 \end{aligned}$$

ECONOMIC LOSS

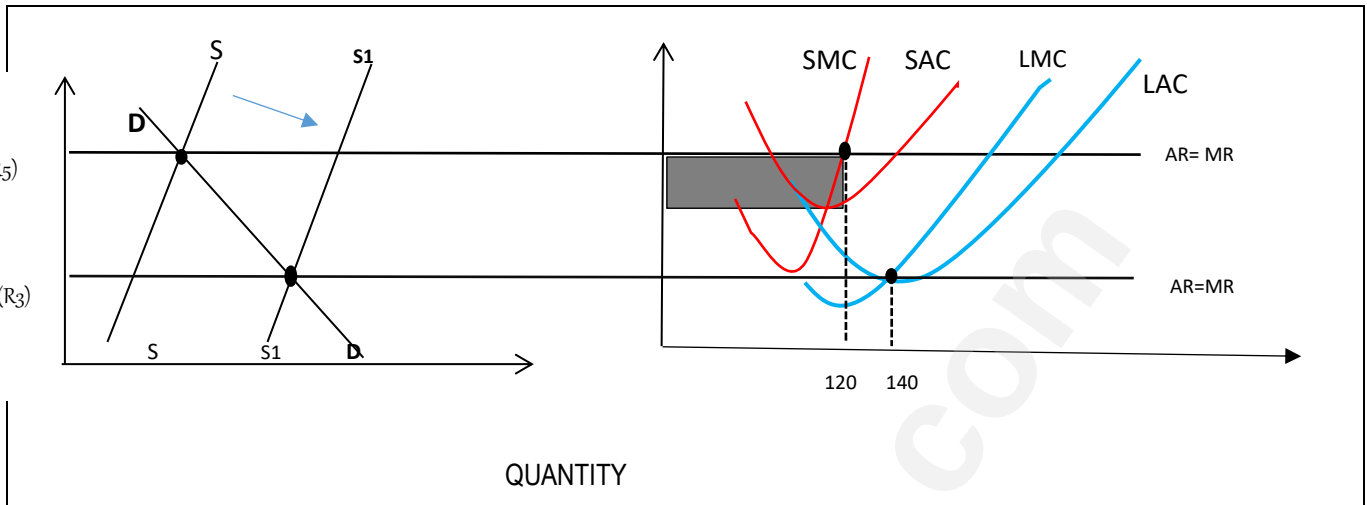


- Economic loss when its Total revenue is less than Total Costs ($TR < TC$).
- The Average Revenue (AR) of R20 is lower than the Average Costs (AC) of R23.
- The firm loss minimisation point is where $MC = MR$, at point e. This is the point at which the firm must produce to keep its loss at a minimum level.

Calculations

$$\begin{aligned}
 \text{Economic loss} &= \text{TR} - \text{TC} \\
 &= (P \times Q) - (AC \times Q) \\
 &= (20 \times 100) - (23 \times 100) \\
 &= 2000 - 2300 \\
 &= -300
 \end{aligned}$$

LONG RUN EQUILIBRIUM OF AN INDUSTRY AND INDIVIDUAL FIRM



- In the **short run** the price (P or R_5) is higher than the SAC , the **firm makes economic profit** (represented by the shaded area).
- In the long run the **economic profit attracts new businesses** in to the market as such **supply will increase** (shift to S_1S_1)
- Furthermore, the increase in supply will come as a result of existing firms increasing their production levels.
- The increased supply causes the **price to fall** to price P . The price is at a point where $LMC = LAC$. Therefore, the **firm makes normal profit**

COMPETITION POLICY

- In South Africa, competition policy is carried out using the Competition Act of 1998.
- The Competition act provides for the establishment of the Competition Commission, Competition Tribunal and the Competition Appeal Court.
- The Competition Commission's role is to investigate acts of restrictive practices by businesses. It also make recommendations on mergers and acquisitions applications.
- The Competition Tribunal is responsible for providing judgement over the cases referred to it by the Competition commission.
- The Competition Appeal Court serves those businesses that are unhappy with the judgement of from the Competition Tribunal. The appeal court may confirm, amend or set aside a decision made by the Competition Tribunal.

Aims of competition policy

- To promote healthy competition among businesses.
- To prevent restrictive practices such as collusion.
- To protect the consumer against unfair pricing and inferior products.
- Provide all South Africans with equal opportunities to participate fairly in the economy.
- To regulate the growth of market power by means of takeovers and mergers.
- To prevent the abuse of economic power such as of monopolies