18. OLIGOPOLY

Q:1 Explain the main Features of Oligopoly?

(A) **Oligopoly** :- Oligopoly is one of the important Market Structure where Very few firms are selling either Homogeneous or Differentiated Products. When firms are selling Homogeneous goods is known as Perfect Oligopoly market. When firms are selling differentiated goods is known as Imperfect Oligopoly market. The word Oligopoly is taken From Greek word 'Oligous' which means 'Few' and 'poly' means 'seller'

(B) **Meaning** :- **According to Feller** –

" Oligopoly means competition among Few "

(C) **Examples of Oligopoly are** – Automobile sellers, Electronics sellers, Cement sellers, Oil Producing Companies, Mobile Service Providers etc.

(D) **Features of Oligopoly** :- economicsguidance.com

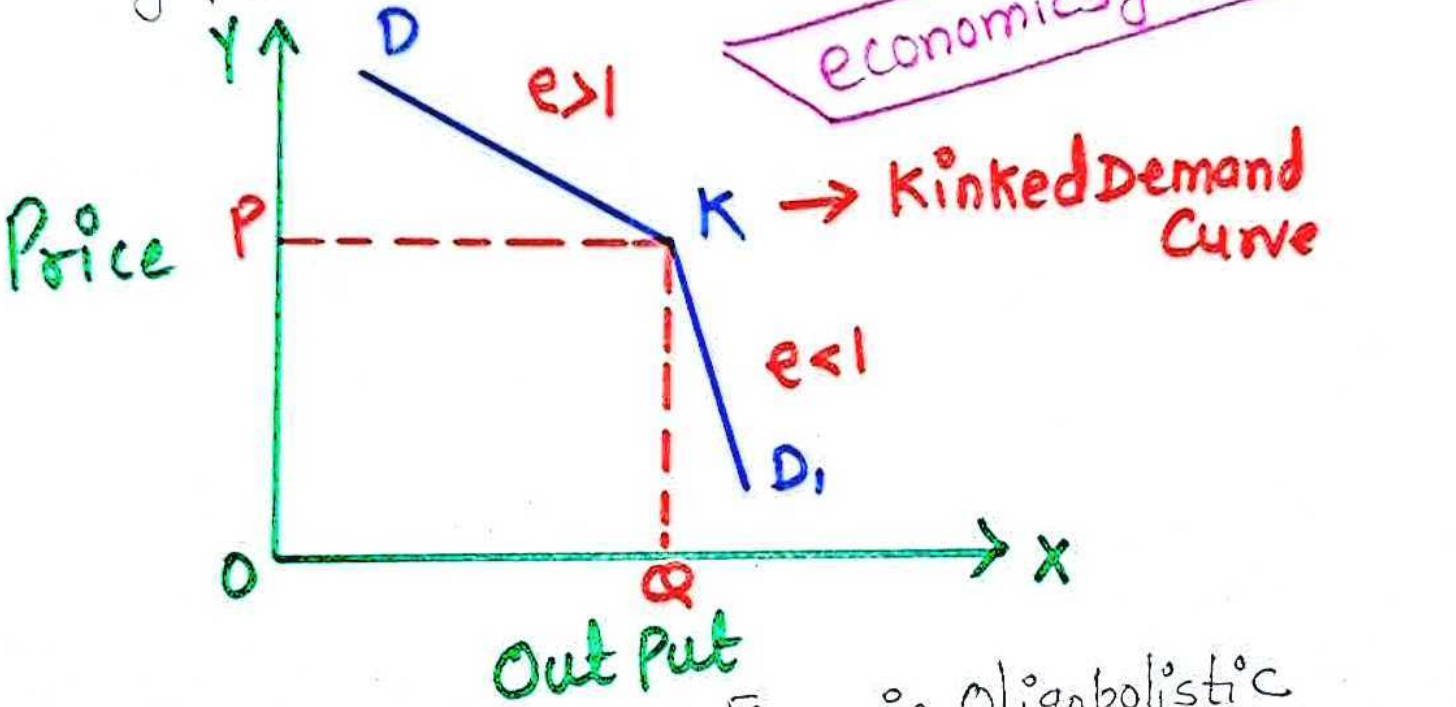
1. **Few Sellers** :- Under Oligopoly market there are Few Sellers who enjoys more Control over the Product. These Few sellers are interdependent on each other to take Price-Output decision. An individual Firm neither free nor independent to take its

Own decisions about Price and Output.
According to W.J. Baumal – Rivals may decide to Come together and Co-operate to achieve their objectives Or they may try to fight each other to the death. Rivals may follows Non-Price Competition or Provide Secret discounts or better services to Customers. Generally Firms Prefer Collusion to avoid Price-War.

2. Interdependence :- The Sellers in Oligopoly Market depends on each other. If any firm makes Changes in Price OF Product, design, advertising or Nature of Product etc then Other firms will also try to bring Same Changes in market. Thus in Oligopoly market all the firms are inter-dependence regarding Price and Output Policy.

3. Uncertainty :- In Oligopoly market, we Observe Uncertainty due to different behaviour Patterns.
Example :- If an Oligopolist increases his output to Capture Large share of market then other firms also react in same way.
If an oligopolist try to sell more by reducing Price, then Other firms also respond in same way
Rivals may Join hands and Co-operate with eachother or rivals may try to fight with each Other.

4. Indeterminateness :- In Oligopoly market, it is difficult to draw accurate demand Curve. An Oligopolist demand curve is Uncertain because Sellers Price Policy, Out Put Policy are Unpredictable All firms are interdependence of each other Thus we get indeterminate demand curve in Oligopoly market.



According to Paul Sweezy, firms in Oligopolistic market have Kinked Demand Curve. It is made up from Two Segments i) DK - Relatively Elastic (e>1)
ii) KD_1 - Relatively inelastic (e<1)

5. Price War :- In Oligopoly market, there is tough Competition among the Sellers. Oligopoly try to reduce the Price to Capture the market. This Price war Prevent New Entrants and Forces Marginal Firms to Leave the market. Example - During 1999, many Oil Suppliers Shutdown their business due to Losses.

Price War is mostly found in Aviation Industry, Automobile Industry, T.V set manufacturers, Communication Industry etc

Consumers are the beneficiaries of the price war. Consomers Pay Less for better Quality and Producers Can earn more due to increase in demand at Lower Price.

To avoid Negative effect of Price war, Oligolists try to Co-operate with each other by fixing-Rigid Price

6) Strategic Decisions :-

Oligopoly adopt appropriate Strategies to enjoy maximum profit. There are Two options available for Oligopoly—

i) Firms Co-operate with each other.
ii) Firms have Open Competition in market.

i) If the firms try to Co-operate with each other to avoid Price-War, it will help them to earn maximum Profit. But Under Cartel, members maynot always Co-operate with each other.
Example- OPEC. Some time Follower member Countries may not Co-operate with Price-Leader in market.

ii) When Firms have Open Competition in market, then Firm has to be careful not only about his decisions but the reactions of its rivals.

7. **Advertisement and selling cost :-** Advertising is a Powerful instrument in the hands of Oligopolist Each firm tries to attract Consumers towards its Product by incurring more expenditure on Advertisement and Selling Cost.
According to Prof. Boumol - " Under Oligopoly Advertising Can become Life and Death matter. "

8. **Lack of Uniformity :-** There is Lack of Uniformity among the firms in terms of Size. Some firms may be Very Small while Others may be too Large.

9) **Entry Barriers :-** In Oligopoly market, there is Close-Competition among the Sellers. There is no barriers to entry into or Exit from Industry in Short-Run. But in Long-Run, Firms has to face Certain Entry Barriers such as- Government Licence, Patents etc.

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Q:2 Write the Short Note - Collusive and Non-Collusive Oligopoly ?

(A) **Introduction :-** In Oligopoly market, we observe either Competition or Collusion. The sellers are interdependence on each other For Price Policy. Due to

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tough competition Few sellers collude with each other to avoid Price-War.

(B) Types OF Oligopoly Market :-

(1) Non-Collusive Oligopoly :-

Under Non-Collusive Oligopoly market, Firms behave independently even though they are interdependent in market. Every Seller Keep Watch over any move of its rivals to Stand in the market

Kinked Demand Curve is the example OF Non-Collusive Oligopoly.

Main Features OF Non-Collusive Oligopoly Market :-

i) Few Large firms
ii) Entry Barriers
iii) Non-Price Competition
iv) Product differentiation.
v) Interdependance in decision-making etc.

(2) Collusive oligopoly :-

To Reduce Competition and Uncertainty in market Few firms work together. Firms makes Cartel to determine Price. Due to Price fixing these firms Contool Supply and enjoy monopoly Power in market.

Main Features OF Collusive Oligopoly :-

i) Market is dominated by Few Large firms
ii) Price Leadership / Price-Fixing

iii) Inelastic Demand.

iv) Reduce Competition etc.

The dominant firm may take the Role of Price Leader and decide the Price of Output and Output Policy for market. It helps to reduce Competition among firms.

Q:3 Discuss the Price Rigidity Situation in an Oligopoly market with the help of a Kinked Demand Curve? OR Explain Equilibrium of an Oligopoly Firm Facing Kinked Demand Curve?

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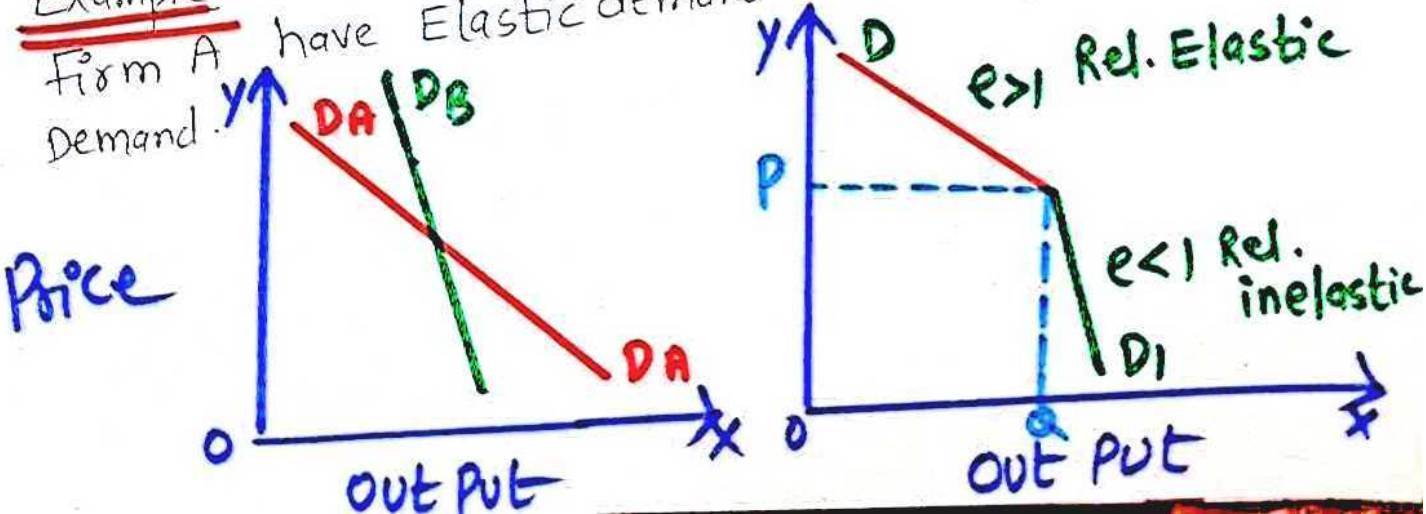
(A) Price Rigidity in Oligopoly market :-

Due to Uncertainity and Interdependence of Firms in Oligopoly market Leads to Indeterminateness of Demand Curve.

According to Paul Sweezy an American economist and Hall and Hitch - Oxford Economists, there is Kinked Demand Curve in Oligopoly market.

Example :- There are Two Firms - Duopoly in the market. Firm A have Elastic demand and Firms B have inelastic Demand.



1) D_A is demand curve of Firm A which is Relatively Elastic.
D_B is Demand Curve of Firm-B which is Relatively inelastic
By Joining the demand of both Firms we get DD_1 Kinked demand Curve made up of Two segments
   i) - DK - Relatively Elastic ($e>1$)
   ii) - KD_1 - Relatively inelastic ($e<1$)
2) Producer can sell OQ Out Put at Rigid Price-OP. Here we find Kink (Turning Point of market) on Demand Curve at Point-K.
3) IF Producer try to Reduce the Price, Rivals will Quickly take action on it due to close-interdependence in market.
4) IF Producer try to raise the Price, he would lose his Customer and buyers will purchase from other oligopolist because demand is Relatively Elastic.
5) Thus OP Price is Rigid Price fixed in oligopoly Market.

(B) Equilibrium of Firm in Oligopoly Market

A Producer enjoy Equilibrium in Oligopoly market at Kinked demand Curve where Rigid Price is fixed in market. It is explained with the help of Following diagram :-

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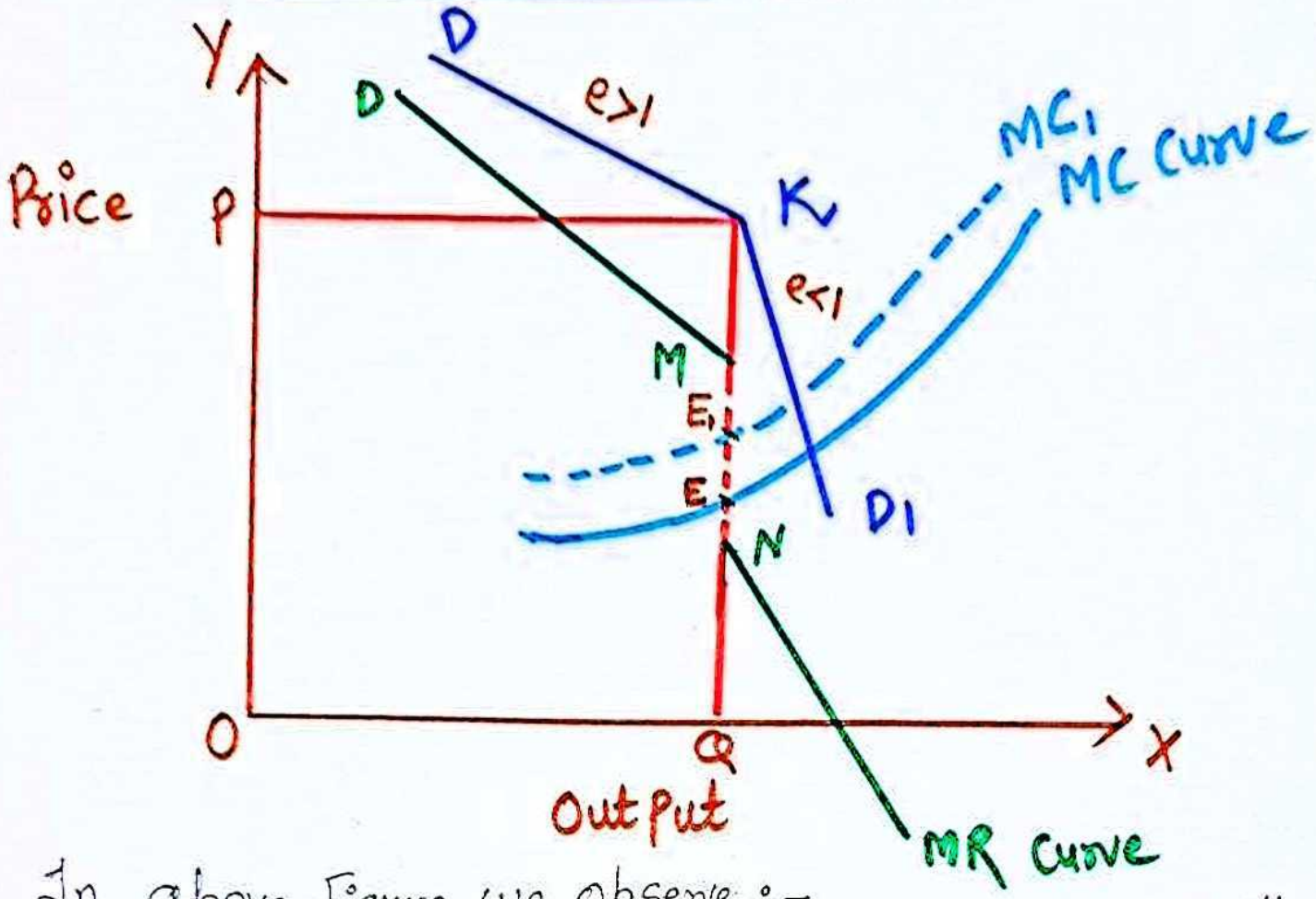

In above figure we observe :-

1) DD_1 is Kinked Demand Curve in Oligopoly market. It is made up of Two segments —
   i) DK - Relatively Elastic (e>1)
   ii) KD_1 - Relatively inelastic (e<1).
2) The Kink-K in Oligopoly market cannot determined at specific Period of time. It may be vary from One month to one year or 2 years etc.
3) The Producer enjoys Equilibrium at Point K. Here OQ output is sold at OP Price.
4) The time gap between Two Demand segments is Very Special because during that Period, Marginal Cost may be increase due to —
   i) Increase in Cost of Raw material

ii) Increase in Wages of Labour.
iii) Increase in Price of Power, Fuel etc.
iv) Increase in government Taxes.
v) Increase in Transport Cost etc.

5] When Producer enjoy Equilibrium at Point E, where MR = MC. Here Producer enjoy Excess Profit due to Low Cost of Production.

6] When Producer enjoy Equilibrium at Point E_1 where $MR = MC_1$. Here Producer enjoy Normal Profit due to increase in Marginal Cost but he cannot raise the Price.

7) Thus, In Oligopoly market, Producer fix Rigid Price-OP. Here Producer Cannot increase or decrease the Price-OP. He has to anyhow enjoy Equilibrium at Kink on Kinked Demand Curve.

Q84 Discuss the Reasons for Forming Cartels and their Effects ?
Explain the model of Collusive Oligopoly ?

(A) Collusive Oligopoly / Cartel Formation :-

Firms Under Oligopoly market wants to have Collusive Oligopoly by Cartel Formation. Cartel helps to Reduce-

i) Uncertainty in market
ii) Interdependence on each other
iii) Cut-throat Competition

iv) Price War etc.

(B) Meaning :- "A Cartel is an agreement among Competing firm to Collude (Join) together to earn higher Profits."

(C) Types of Collusive Oligopoly :-

1. Market Sharing Cartel
2. Centralised Cartel.

1] Market Sharing Cartel :- Under this market, each member gets the exclusive (special) rights to operate in particular area.

2] Centralised Cartel :- Under this market, Cartel Will decide –
- Price of Product
- Distribution of Product
- Norms of Profit sharing etc.

Example :- OPEC is the best example of Centralised Cartel. Some Cartels Formed Secretly. They may or maynot have Written Agreement. Such Cartels are harmful for markets.

(D) Effects of Collusive Oligopoly / Cartel :-

(1) Maximum Profit Under Centralised Cartel:-

Under Centralised Cartel, a Cartel will enjoy maximum Profit at Equilibrium Level where—

Industry MC = Industry MR.

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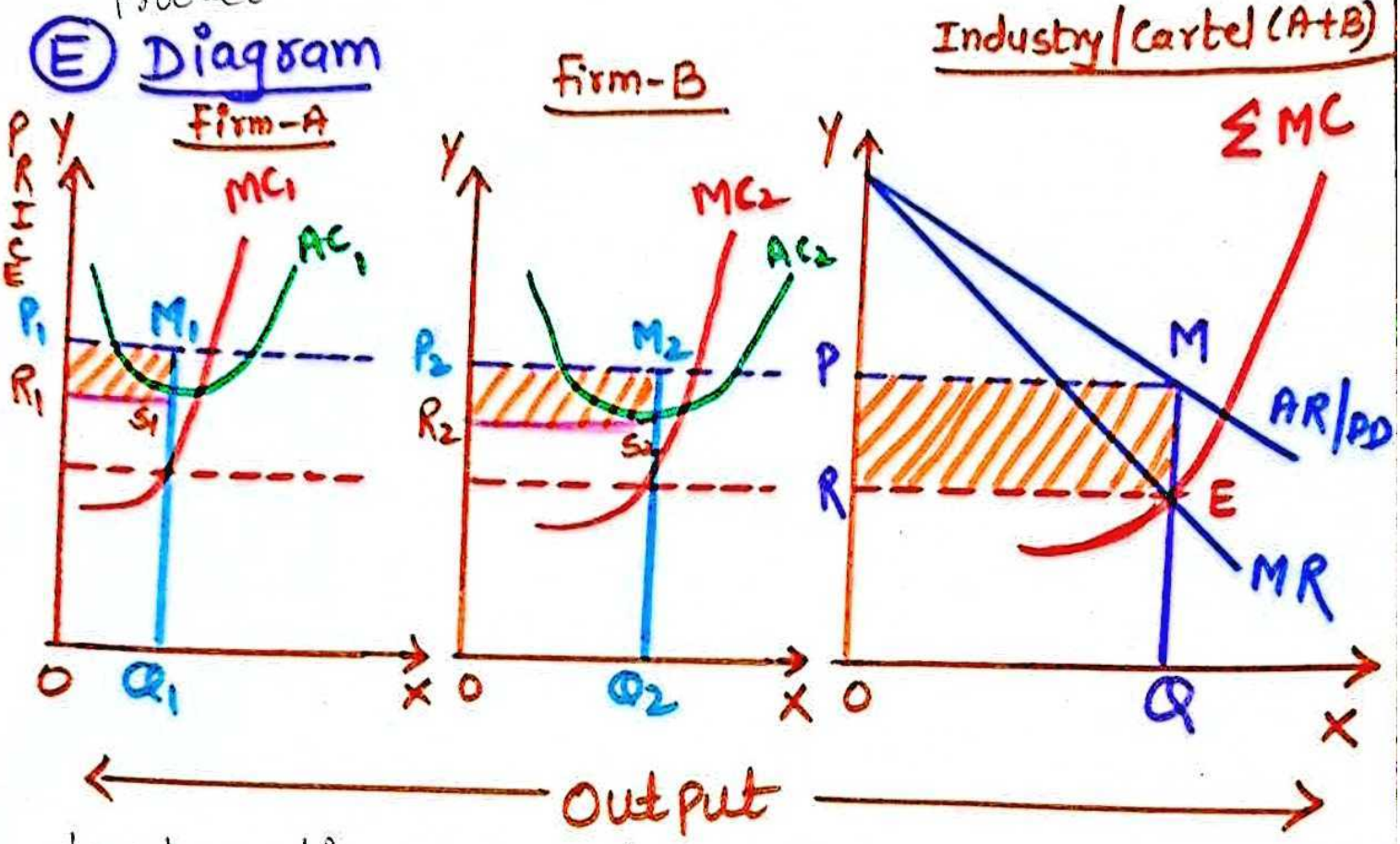
Let us assume that there are Two firms A and B Firm A is Low Cost firm and Firm B is High Cost firm.

Both firms A and B are producing Homogeneous Product.

(E) Diagram



In above diagram we observe —

1) Firm A have Low Cost of MC_1. Here Producer sell OQ_1 Output at OP_1 - Price. Here Producer earn Profit = $P_1R_1S_1M_1$.
2) Firm-B have high Cost of MC_2. Here Producer sell OQ_2 Output at OP_2 - Price. Here Producers earn Profit = $P_2R_2S_2M_2$.
3) After Centralised Cartel - Firm A + firm B = Industry.
   i) Marginal Cost Curves are added Horizontaly = $MC_1 + MC_2 = \Sigma MC$
   ii) Output Produced together - $OQ_1 + OQ_2 = OQ$.
   iii) Same Price = OP is fixed in Market
   iv) Now Cartel enjoy Maximum Profit at Equilibrium E, Where - $MR = \Sigma MC$

Maximum Profit = PREM at Maximum Output = OQ

(2) Non-Price Competition :- In Oligopoly market, Price remain Rigid due to indeterminateness of Demand Curve.
If Cost of Production is Same, Price will also remain Same for different Firms.
But If Cost of Production is different, then Low cost Firm try to fix Low price. In such case Cartel may break Thus Firms do not change the price. Price remain same but they follows Non-Price Competition / Covert Cheating. It means Firms Provide Secret Discounts, Commission, additional Facilities and services to Retailers and Consumers.

(3) Quota :- Under this system, all the firms Fix the Price and Quota of Output. If the Cost of Production is the Same for all the Firms under Cartel, then Cartel fix Higher Possible Price and share the market equally between them.
But when Cost of Production is different for all the Firms then Low Cost Firms are always breaking rules.

Few Examples of Cartel :- i) Beer Cartel - Netherland - 2007
ii) Drug Cartels in Mexico and Colombia
iii) Cement Cartel - Argentina - 1981 - 1999.
iv) Four airline Companies - South Africa - 2004.
v) Pharmaceutical, steel and Crushed stone - Cartel in Brazil etc.

Q:5- What is Price Leadership? Explain Various types and Limitation of Price-Leadership?

(A) Price Leadership :-

In a free Oligopoly market, there is always a Price War in the market which Provide more benefits to Consumers. To avoid Unhealthy Competition, it is necessary to to have One Leader firm which decide the Price. Thus Price Leadership is informal and tacit Understanding between Producers in Oligopoly market

(B) Types of Price Leadership :-

1. Dominant Firm Leadership :-

In Oligopoly market, a firm Producing goods and Services at Large scale enjoy Position of DOminant firm in market. The Dominant firms have great influence over the market. But the small firms have to accept the decision taken by dominant firm. The dominant firms decide its own demand Curve and fix the Price of output which bring Maximum Profit.

2. Barometric Price Leadership :-

Here Large Experienced and Respected firm Plays Role of Price Leadership. The Leader firm brings changes in Price and other Firms Follow him willingly. He takes the decision

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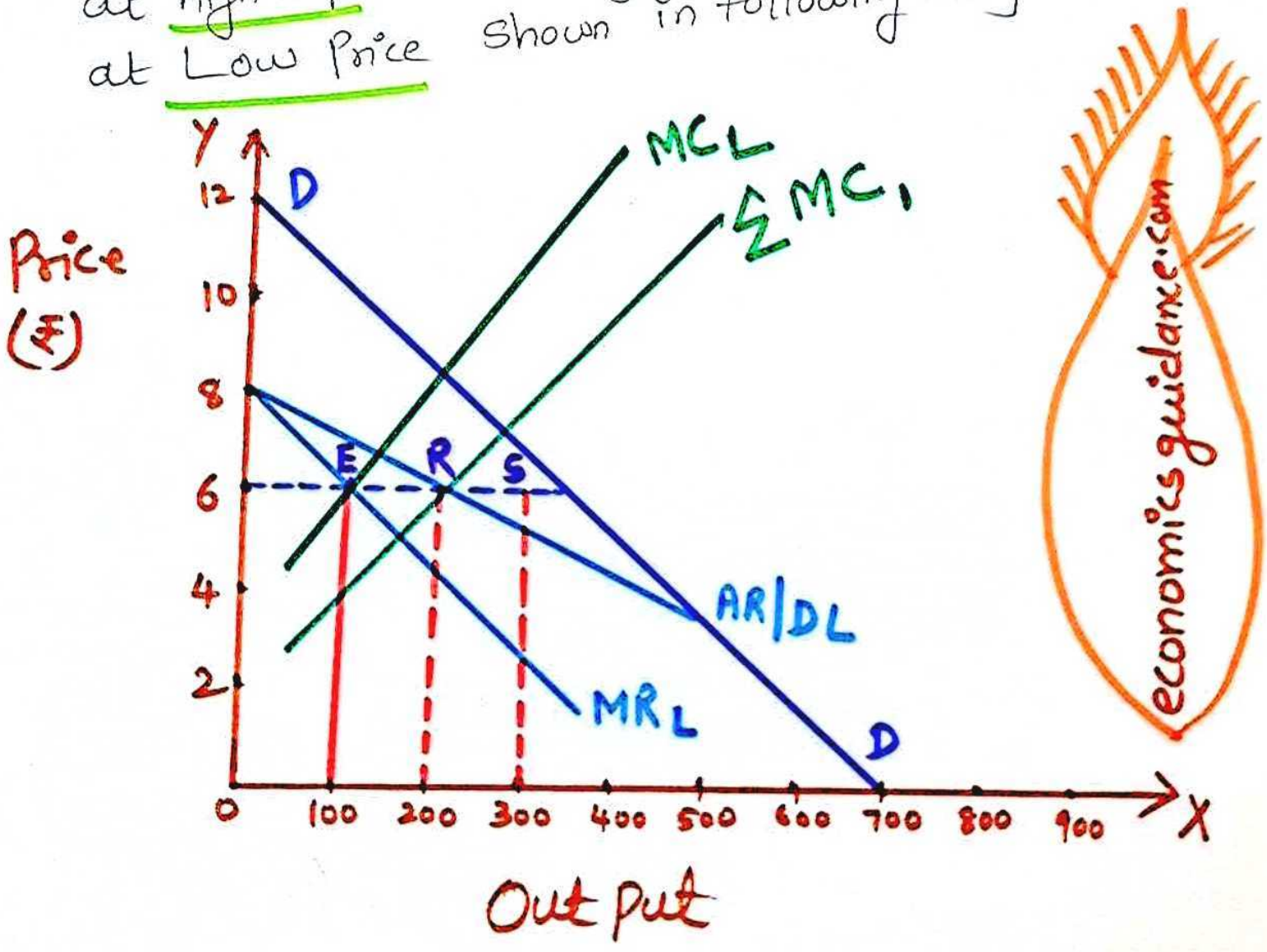
regarding market conditions, cost of production, competition etc.

(3) Aggressive Price Leadership :- A Large and dominant firm become Leader of Oligopoly market due to its Aggressive Price Policies. It compels Other firms to accept his Price Policy. The Followers has to follow the decision of Price Leader.

(4) Low Cost Firm Leadership :- An Oligopoly firm which enjoys the benefits of Low Cost of Production can decide the Low Price For the Product. The High Cost firms will not able to sell their Products at higher Price. So they are Forced to sell their goods at Low Price shown in Following diagram :-



In the above diagram —

1) DD is the market demand curve for the Product.
2) D_L is the demand Curve of Leader firm who has Less Cost of Production.
3) MR_L is the Revenue Curve of Leader firm and MC_L is the Marginal Cost Curve of Leader firm. Leader Enjoys Equilibrium at Low cost ₹6 where

$MR_L = MC_L = ₹6 = 100$ Units.

4) ΣMC_1 is the Marginal Cost Curve of follower firms.

MC_1 = R Price = 200 Units

5) Thus Total Out Put Sold in Oligopoly market = 300 units
100 Units are sold by Leader firm and
200 Units are sold by Followers at ₹6.

(C) Limitations of Price Leadership :-

1. Product Differentiation :- If the Oligopoly is Selling differentiated Product, the Leadership will become difficult. Each Firm incur huge amount on Advertisement to attract Customers.

2. Non Price Competition :- The Followers may follow the Price Set by Leader but they may follow Non-Price Competition tactics. Firms Provide Secret discounts, Commissions additional facilities to Retailers and Customers.

3. Difference in Cost of Production :- A Producer, Produce goods and Services at Low cost and become Leader of Market. IF Followers have Lower Cost than Dominant firm then it become difficult to be Leader of Market.

Q:6 Choose the Correct Option and rewrite the statements:-

1. An Oligopolist is **Uncertain about his decisions**

a) Uncertain about his decisions b) Certain about his decisions

c) Totally depends on Others.

2) An Oligopolist Faces **Kinked Demand Curve**

a) a smooth downward sloping demand curve.

b) Horizontal demand curve

c) Kinked Demand Curve.

3) Collusive Oligopoly is beneficial to **Producers**

a) Consumers b) Producers c) New Entrant.

4) Price Leadership avoids **Price War**

a) Price War b) New entrants to the market

c) Promotes Product differentiation.

5) An Oligopoly is a market in which **There are only a Few Sellers selling differentiated or Homogeneous Product**

a) There are only a few Sellers selling differentiated or Homogeneous Products.

b) Firms are Price makers c) Firms are not interdependent.

d) There are Few sellers selling Products that have no Close-Substitutes.

6) A Kinked Demand Curve indicates **Price-Rigidity in Non-Collusive Oligopoly**

a) Price Flexibility in Non-Collusive Oligopoly

b) Price-Flexibility in Collusive Oligopoly

c) Price rigidity in Collusive Oligopoly

c/d) Price Rigidity in Non-Collusive Oligopoly.

Q:7 State whether the following statements are True or False With reasons:-

1. An Oligopoly Firm is Free to take its own decisions about Price and Output.

Ans:- False. Reasons:- Q:1 D Part - 1st Point

2. An Oligopolist does not have to determinate demand Curve.

Ans:- True Reasons:- Q:1 - D Part - 4th Point

3 A Cartel is formed by Oligopolists to avoid Price-war

Ans:- True Reasons:- Q:2 A-Part

4) Non Price Competition is absent in Oligopoly.

Ans:- False Reasons:- Q:4 - D Part - 2nd Point

5) Price is Very Flexible in Oligopoly.

Ans:- False Reasons:- Q:3 - A-Part

6) The Kinked Demand Curve has discontinuous Portion of MR.

Ans:- True Reasons:- Q:3 - B - Part

Q:8 Match the Following :-

1. In Oligopoly the Products are Mostly → Differentiated
2. Price Rigidity in Oligopoly Leads → Kinked Demand Curve
3. Price Leadership aim at → Avoiding Price War
4. Higher Rate of Discount → Non-Price competition

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