Economics

(Micro-economics)

Chapter 5: MARKET EQUILIBRIUM

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MARKET EQUILIBRIUM

Market Equilibrium

It is a situation of the market in which demand for a commodity is exactly equal to its supply. Market equilibrium is defined as a state of the market when demand for a commodity is equal to its supply, corresponding to a particular price.

Equilibrium Price:

The market supply equals the market demand. The cost price at which equilibrium is reached is known as the equilibrium price, and the quantity purchased and sold at this cost price is known as the equilibrium quantity.

Equilibrium Quantity:

Equilibrium Quantity the term equilibrium quantity alludes to the number of goods provided in the marketplace when the amount provided by vendors precisely coordinates with the amount demanded by purchasers. It is an idea inside the branch of knowledge of market equilibrium or market balance and is identified with the idea of equilibrium price.

Excess Demand:

When the amount wanted exceeds, the quantity supplied at the current price level, the market is said to be in excess demand.

Yd > Ys

Here, Yd = Market Demand

Ys = Market supply

Excess Supply:

If at any price market supply is greater than market demand. it is said excess supply in the market.

Ys > Yd

Here, Yd = Market Demand

Ys = Market supply

Simultaneous Change In Demand & Supply And Market Equilibrium

Simultaneous Increase In Demand and Supply

A. Increase in Demand > Increase in Supply

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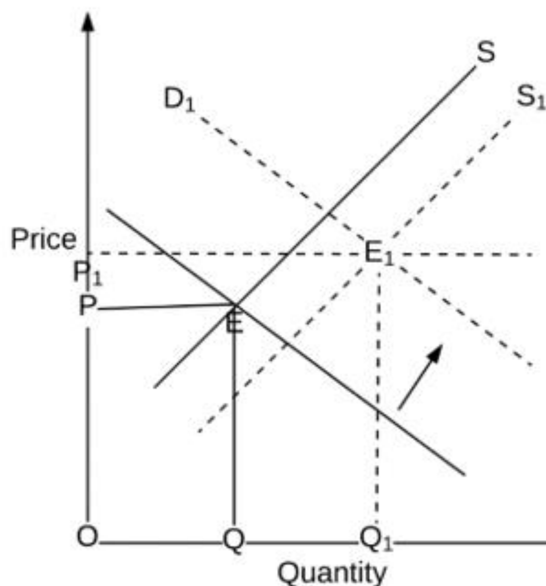
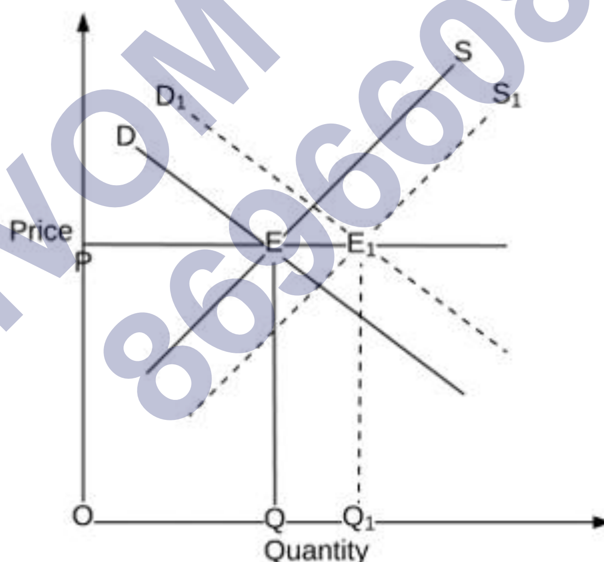


D is the initial demand curve and S, is the initial supply curve. E is the point of initial equilibrium. OP, is the equilibrium price and OQ, is the equilibrium quantity Due to an increase in demand, D, is the new demand e Due to an increase in supply, S is the new supply curve.

B. Increase in Demand = Increase in Supply:



Shows increase in demand is equal to an increase in supply. There is no excess demand or excess supply. Accordingly, the equilibrium price remains unchanged, i.e., OP. However, equilibrium quantity increases from OQ to OQ1. This is because both demand and supply have increased.

Increase in Demand< Increase in Supply

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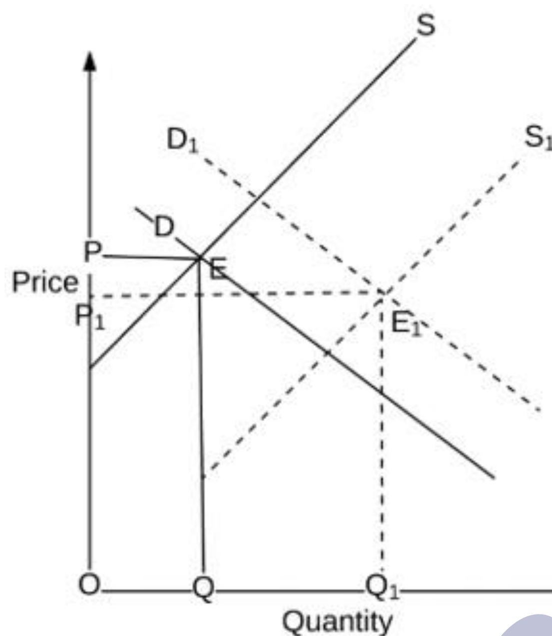
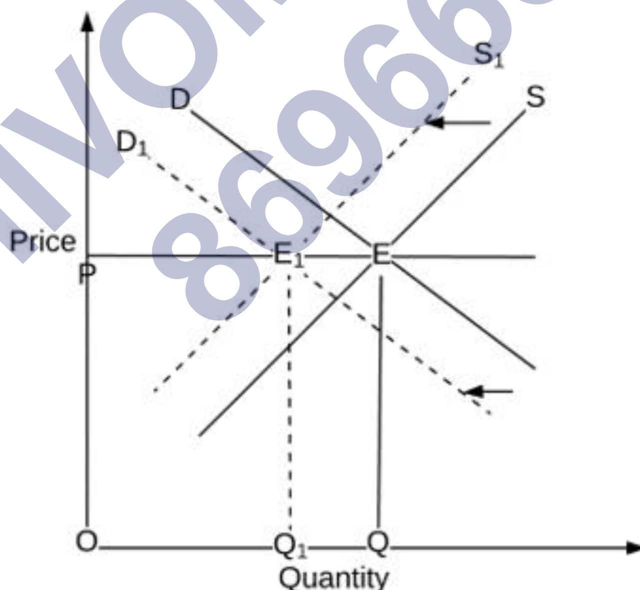


D is the initial demand curve and, is the initial supply Curve. E is the point of initial equilibrium. OP is the equilibrium price and is the equilibrium quantity. Due to the increase in demand, D is the new demand curve. Due to the increase in supply, S is the new supply curve.

Simultaneous Decrease In Demand and Supply

Decrease in Demand = Decrease in Supply



When decrease in demand is proportionately equal to decrease in supply, then leftward shift in demand curve from D to D_1 is proportionately equal to leftward shift in supply curve from SS to S_1S_1. The new equilibrium is determined at E_1 As demand and supply decrease in the same pro-portion, equilibrium price remains same at OP, but equilibrium quantity falls from OQ to OQ_1.

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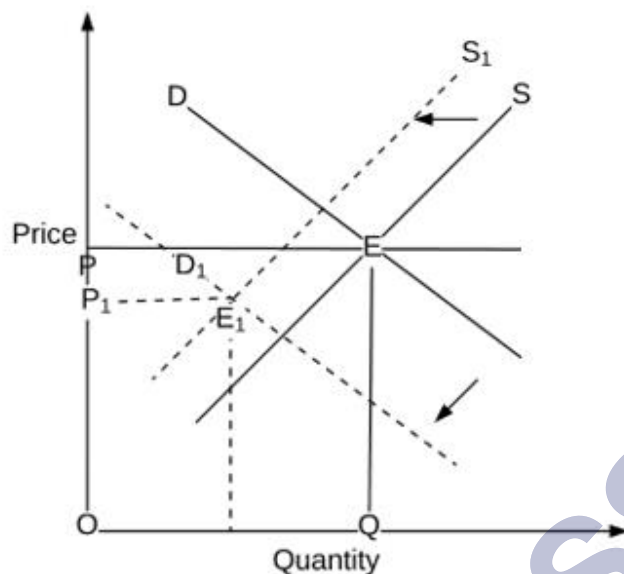
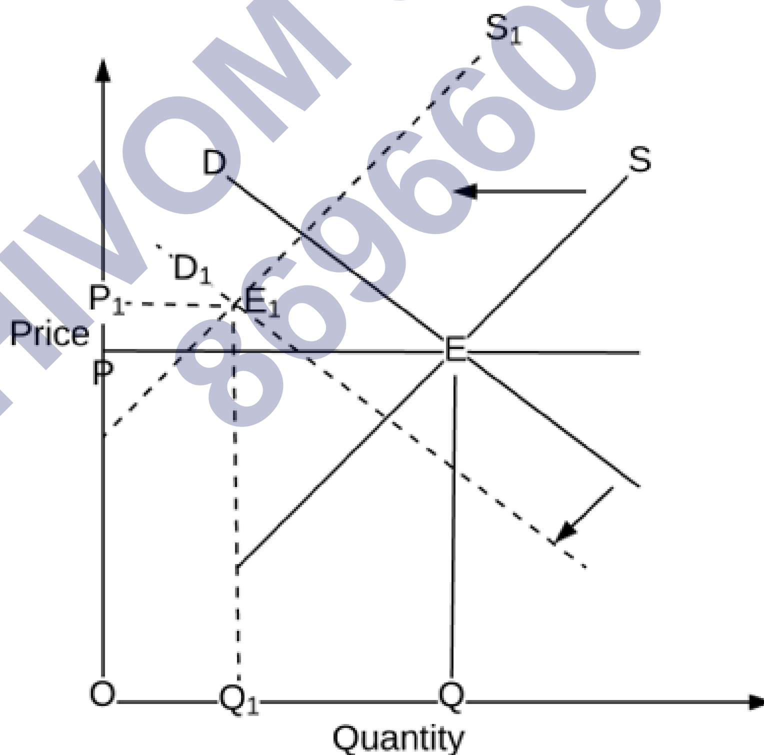
Decrease in Demand > Decrease in Supply



When decrease in demand is proportionately more than decrease in supply, then leftward shift in demand curve from D to D_1 is proportionately more than leftward shift in supply curve from S to S_1. The new equilibrium is determined at E_1, equilibrium price falls from OP to OP_1 and equilibrium quantity falls from OQ to OQ_1.

Decrease in Demand < Decrease in Supply



When decrease in demand is proportionately less than decrease in supply, then leftward shift in demand curve from D to D_1 is proportionately less than leftward shift in supply curve from S to S_1. The new equilibrium is determined at E^1 equilibrium price rises from OP to OP_1 whereas, equilibrium quantity falls from OQ to OQ_1.

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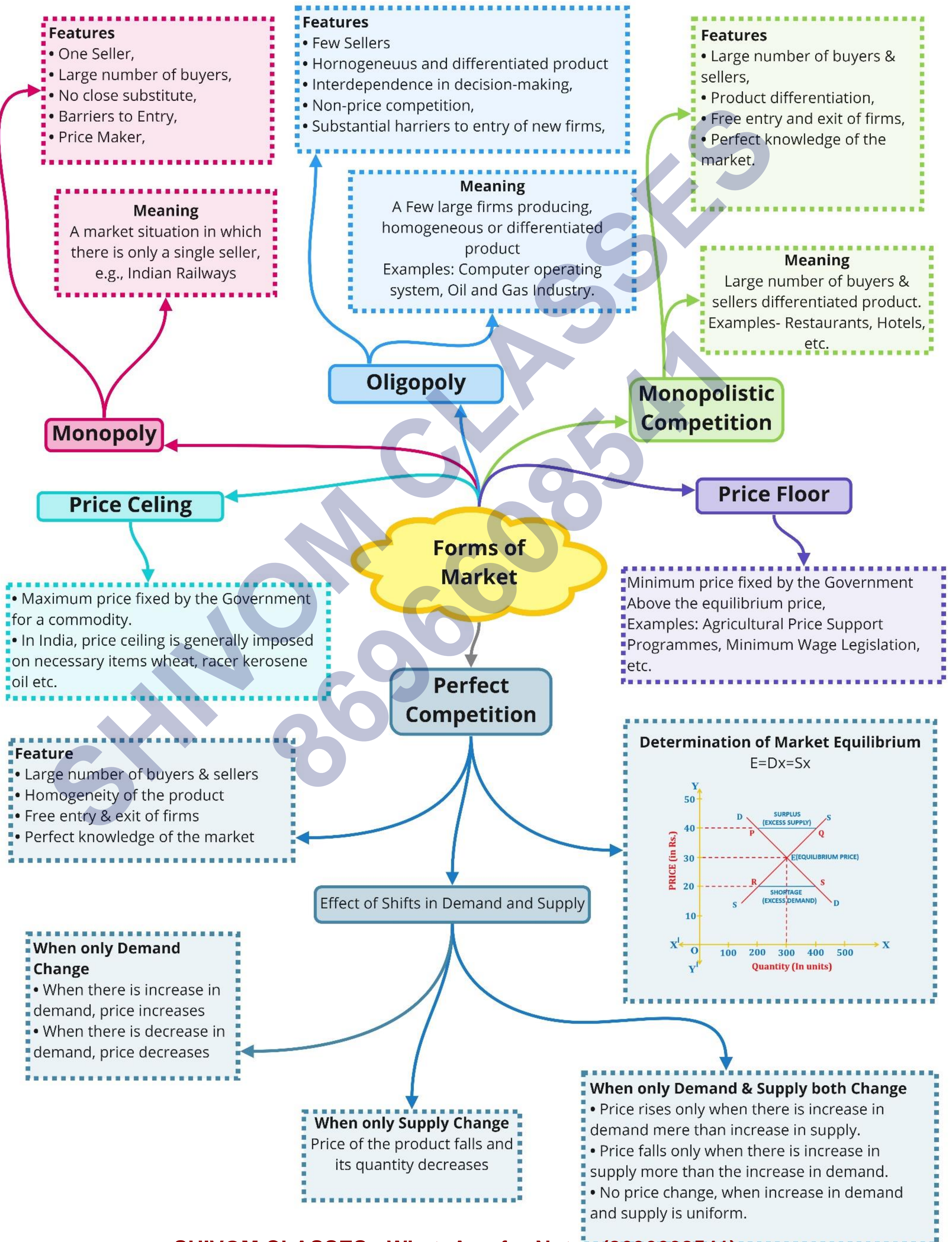
Price Ceiling & Price Floor



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Important Questions

Multiple Choice Questions-

1. Which is a characteristic of the market ?

   (a) One Area

   (b) Presence of both Buyers and Sellers

   (c) Single Price of the Commodity

   (d) All the above

2. Which is a basic for the classification of the market ?

   (a) Perfect Competition

   (b) Zero Competition (Monopoly)

   (c) Imperfect Competition

   (d) All the above

3. Which of the following is a feature of perfect competition ?

   (a) Large Number of Buyers and Sellers

   (b) Homogeneous Units of the Product

   (c) Perfect Knowledge of the Market

   (d) All the above

4. In which market product differentiation is found ?

   (a) Pure Competition

   (b) Perfect Competition

   (c) Monopoly

   (d) Monopolistic Competition

5. Which of the following is true in perfect competition ?

   (a) Firm is price-taker, not price-maker

   (b) Firm's demand curve is perfectly elastic

   (c) AR = MR

   (d) All the above

6. Which one is a feature of monopoly ?

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(a) Single Seller and Many Buyers

(b) Lack of Close Substitutes

(c) Restrictions of New Firm entry

(d) All of these

7. Which one of the following is true for monopoly ?

(a) Firm is price-maker

(b) Demand curve slopes downward

(c) Price discrimination possibility arises

(d) All the above

8. Which one is a feature of monopolistic competition ?

(a) Differentiated Product

(b) Selling Cost

(c) Imperfect Knowledge of the Market

(d) All the above

9. A market in which there is free entry and exit, the market is:

(a) Monopolistic Competitive Market

(b) Imperfect Competitive Market

(c) Perfectly Competitive Market

(d) None of these

10. What does a monopolist market show ?

(a) Production process

(b) Distribution system

(c) Nature of market

(d) None of these

11. Price discrimination is found in which market ?

(a) Pure Competition

(b) Perfect Competition

(c) Monopoly

(d) Monopolistic Competition

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12. Which of the following is the feature of pure competition ?
    (a) Perfect knowledge of the market
    (b) Perfect mobility of factors
    (c) Homogenity by products
    (d) All the above
13. Market situation where there is only one buyer is:
    (a) Monopoly
    (b) Monopsony
    (c) Duropoly
    (d) None of these
14. The concept of monopolistic competition is given by:
    (a) Hicks
    (b) Chamberlin
    (c) Mrs. Robinson
    (d) Samuelson
15. Which of the following is not a feature of perfect competition ?
    (a) Large number of buyers and sellers
    (b) Homogeneity of product
    (c) Advertisement and selling cost
    (d) Perfect knowledge of the market

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Very Short Questions-

1. **State whether the following statement is true or false. Give reason.**

   When equilibrium price of a good is less than its market price, there will be competition among the sellers. (hots; Delhi 2013)
2. Give the meaning of equilibrium. (All India 2009 c)
3. Define equilibrium price. (All India 2008,2006)
4. Product differentiation is in which market form?
5. What is the normal profit?
6. What is patent right?

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7. Name two features of monopoly market.
8. What is a price taker company?
9. What is a price maker company?
10. What is cooperative oligopoly?

Short Questions-

1. Define the implication of the following:
   a) Interdependence between firms in Oligopoly
   b) A large number of sellers in perfect competition
2. Explain two features of the monopoly market.
3. Why is the number of firms small in oligopoly? Explain.
4. Explain the implications of a large buyer in a perfectly competitive market?
5. Explain the implications of the following:
   a) Interdependence between firms in oligopoly
   b) Large number of sellers in perfect competition
6. Explain briefly why a firm under perfect competition is a price taker not a price maker?
7. Market for a good is in an equilibrium. There is an increase in demand for this good. Explain the chain of effects. (Delhi 2011)

   or

   At a given equilibrium in the market, explain the chain of effects, of increase in demand for a good. (All India 2010 C)
8. Explain the changes that will take place when in a market the demand for a good is greater than supply at the prevailing price. (Delhi 2010 c)
9. Explain why an equilibrium price of a commodity is determined at that level of output at which its demand equals its supply. (Delhi 2010 c)
10. Suppose the price of a good is higher than equilibrium price. Explain the changes that will establish equilibrium price. (Delhi 2009 c)

Long Questions-

1. What is excess demand for a good in a market? Explain its chain of effects on the market for that good use diagram.(Foreign, 2014)

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2. Market for a product is in equilibrium. Demand for the product decreases. Explain the chain of effects of this change till the market again reaches equilibrium. Use diagram. (Delhi 2014, All India 2014)
3. Market for a good is in an equilibrium. Suppose supply decreases. Giving reasons, explain its effects on equilibrium price and quantity. Use diagram.(Foreign 2014; Delhi 2009 C)
4. Market of a commodity is in equilibrium. Demand for the commodity 'increases.' Explain the chain of effects of this change till the market again reaches equilibrium. Use diagram. (Delhi 2014; All India 2014)
5. At a given price of a commodity, there is an excess supply. Is it an equilibrium price? If not, how will an equilibrium price be reached? Use diagram. (Compartment 2014; All India 2006)

   or

   What is 'excess supply of a good in a market? Explain its chain of effects on the market for that good. Use diagram. (Foreign, 2014)
6. Market for good is an equilibrium. Explain the chain of reactions in the market if the price is(i) Higher than an equilibrium price (ii) Lower than an equilibrium price (All India 2012)

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MCQ Answers-

1. (d) All the above
2. (d) All the above
3. (d) All the above
4. (c) Monopoly
5. (d) All the above
6. (d) All of these
7. (d) All the above
8. (d) All the above
9. (c) Perfectly Competitive Market
10.(c) Nature of market
11.(c) Monopoly
12.(d) All the above
13.(b) Monopsony
14.(b) Chamberlin
15.(c) Advertisement and selling cost

Very Short Answers:

1. True, when equilibrium price of a good is less than its market price, there will be competition among the sellers. At a price lower than market price, there will be excess supply, i.e. supply will be more than demand.
2. Equilibrium is a situation of the market in which demand for a commodity is equal to its supply, i.e. a situation, which is stable.
3. Equilibrium price is the price at which market demand is equal to market supply.
4. Monopolistic Market Competition
5. Normal profit is referred to as the minimum or least amount of profit which is required to keep an organisation engaged in the production process for the long run.
6. Patent right is an exclusive license or right conferred to an organisation to manufacture particular goods or services under a specific technology.
7. The two important features of monopoly market are.
    - There is only one seller in the market and can control the market on his own.

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- The seller can make huge profits as compared to the normal profit.

8. A price taker company are those companies who have no option but to accept the price determined by the industry.
9. A price maker company are those companies who can influence the price of a product on its own.
10. A cooperative oligopoly is a situation of the market where the different companies cooperate with each other in fixing the price of goods or services.

Short Answers-

1.

a) Oligopolies are composed of a few large companies and these companies action can affect the market condition. Therefore, the other contender company will be aware of the market actions and will respond appropriately. Mutual interdependence survives when the action of one company has a significant impact on the other company in the industry.

b) A perfectly competitive market is controlled by the existence of a large number of sellers and buyers of a product, which means no buyers or sellers whose purchase and sell is so large that it will impact the total purchase and sale in the market.

2. The following are the two most crucial characteristics of a monopoly market:

i. **Sole Seller:** As there is only one seller in the market, the seller can influence the market price on its own. A business with market power can increase prices without losing its consumers or competitors.

ii. **High Entry Barrier:** There exist entry hurdles for new enterprises, allowing sellers to earn abnormal profits that are far higher than usual earnings.

3. The fundamental reason for the minimal number of firms in an oligopoly is that there exist barriers that restrict firms from entering the industry. Patents, huge capital requirements, and ownership over crucial raw materials, among other things, prohibit new firms from entering the industry. Only those who can overcome these obstacles will be able to enter and remain in the market.

Therefore, The numbers of firms are small in oligopoly.

4. A huge number of buyers are supposed to be so numerous that an individual buyer's percentage of total purchases is so insignificant that he cannot influence market price by purchasing more or less. As a result, the pricing remains unchanged.

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Every business in the industry would be earning only normal profits due to the large number of buyers. The buyers are the price takers and have no bargaining power in the market.

5. The implications of the above features are as follows

   a) Oligopolies are often made up of a few huge corporations. Because each firm is so huge, its actions have an impact on market circumstances. As a result, rival firms will be aware of a firm's market activity and will respond properly. Mutual interdependence develops when one firm's actions have a significant impact on the other enterprises in the industry.

   b) The presence of a large number of buyers and sellers of a commodity dominates a fully competitive market, which implies that there is no such buyer or seller in the market whose purchase or sale is so huge that it affects the overall sale or purchase in the market. Each buyer/seller owns only a little portion of the market demand/supply.

6. Because the price is set by market forces of demand and supply, a firm in perfect competition is a price taker rather than a price maker. This is referred to as the equilibrium price. At this equilibrium price, all firms in the industry must sell their outputs. The reason for this is that the number of enterprises in perfect competition is so high. As a result, no firm's supply can impact the price. Every company makes the same type of goods.

7. The given diagram shows a situation of increase in demand. The demand curve shifts to the right from DD to D_1D_1 An equilibrium point shifts from E to E_1 Consequently, an equilibrium price and an equilibrium quantity rises from OP to OP, and OQ to OQ1 respectively.

   The chain effects of increase in demand When there is a increase in demand it creates excess demand (equal to O Q_2) at initial price OP and as a result of which price will rise. With rise in price, demand will start falling (according to Law of Demand) and supply will start rising (according to Law of Supply), this process will continue till the time we reach new equilibrium level at $£_v$ where there is no excess demand.

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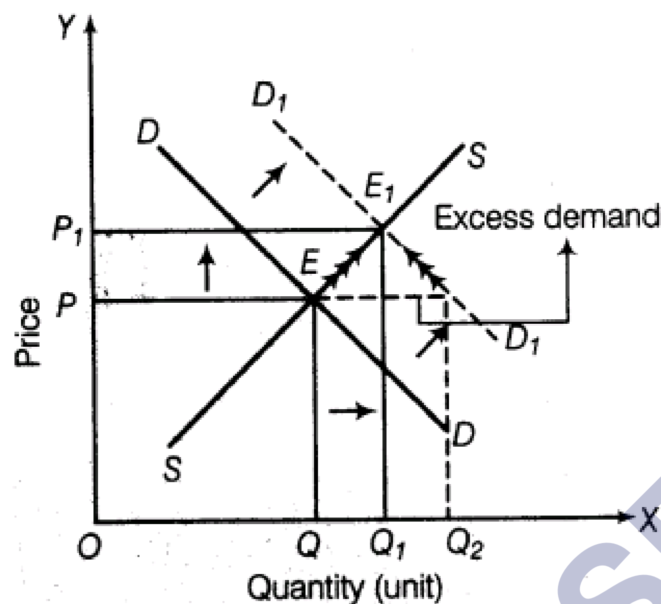

Diagram showing situation of excess demand

8. If at a prevailing price, quantity demanded is more than quantity supplied then supplier will motivate to increase the price of the commodity due to which demand decreases, till it reaches at the equilibrium price where quantity demanded is equal to quantity supplied.

9. An equilibrium is a point where quantity demanded is equal to quantity supplied and an equilibrium can be attained only at that point. If at a given price, supply is more, it will show excess supply and if demand is more, it will show excess demand. Due to excess supply price will fall and due to excess demand price will rise. Hence, price will be stable only at an equilibrium level where demand and supply both are equal.

10. When price prevailing in the market is higher than that of equilibrium price, demand will be less than supply i.e. there is excess supply in the market. Excess supply will force the market price to slide down causing extension of demand and contraction of supply. The process of an extension and contraction would continue till the equilibrium between supply and demand is struck.

Thus, an equilibrium price will be restored through the free play of market forces of demand and supply.

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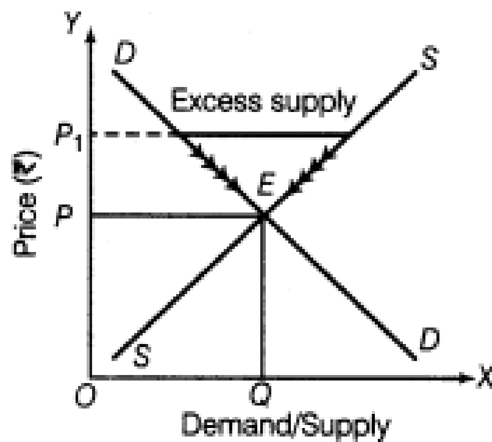
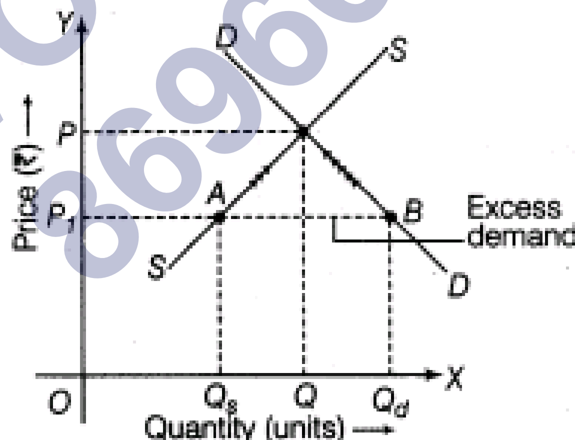


Diagram showing the situation of excess supply

Long Answers –

1. Excess demand refers to the situation in which market demand excess market supply corresponding to a particular price. By definition, equilibrium price refers to the price at which market demand equals market supply, excess demand in the market will create competition among the buyer, which will push price upwards, causing contraction in demand (by Law of Demand) and extension in supply (by Law of Supply).

   This process will continue till the equilibrium is achieved, where again market demand equals market supply. Thus, an equilibrium price will be restored through the free play of market forces. As shown in the diagram below:



   In the above diagram DD and SS are demand and supply curves respectively and equilibrium is at point e where demand equals supply with equilibrium price OP and quantity OQ. Any price below OP will create excess demand S of OP1 where demand equals OQ_d and supply is OQ_s, creating excess demand equal to $Q_d - Q_s$, causing price to rise to reach at OP

2. Effects of decrease in demand of a commodity on equilibrium price and quantity is discussed below with reference to the given figure.

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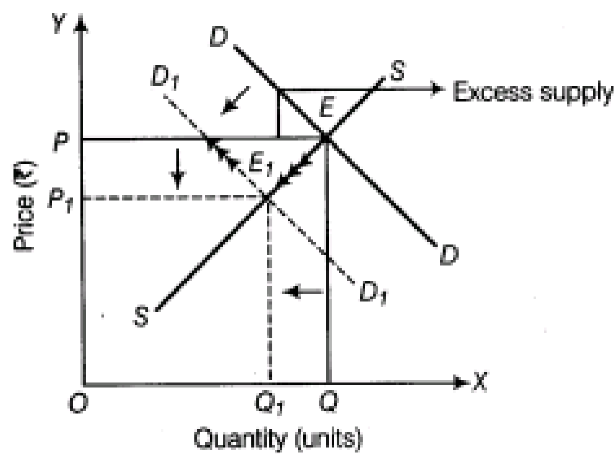

In the given figure, DD and SS are the initial demand curve and supply curve respectively. £ is the initial equilibrium point, OQ is the equilibrium quantity and OP is the equilibrium price. Decrease in demand implies a shift in demand curve to the left. It is indicated by This sets in the following chain of effects.

Decrease in demand implies that less is supplied at the existing price. Given the supply, price of the commodity will tend to decrease from OP to OP_1 Fall in price will cause tend to decrease from OP to OP_1 Fall in price will cause extension of demand and contraction of supply. Here, equilibrium quantity also decreases from OQ to OQ_1.

3. A fall in supply will shift the supply curve to the left. These causes a situation of deficiency of supply (or a situation of excess demand). Accordingly, price tends to rise. In response to rise in price, demand tends to contract and supply tends to extend. This process (of contraction of demand and extension of supply) will continue till, price is reached where quantity demanded is equal to quantity supplied. This occurs at new equilibrium point E1.

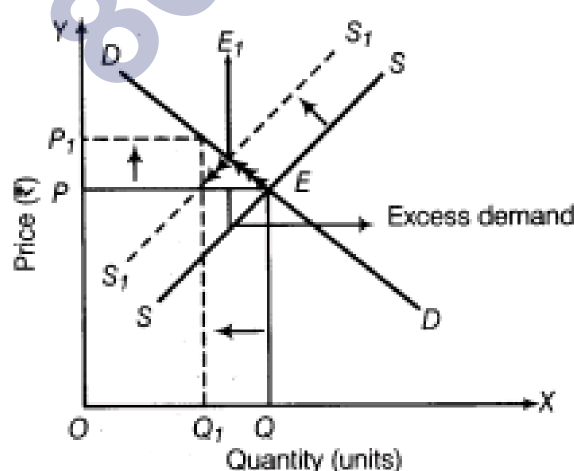

Diagram showing effects on equilibrium price and quantity

4. Effects of increase in demand of a commodity on equilibrium price and quantity is

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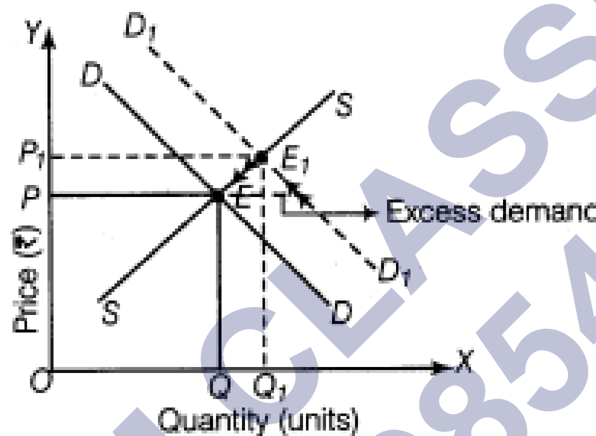
discussed below with reference to the given figure.

In the above figure, DD and SS are the initial demand curve and supply curve respectively. E is the initial equilibrium point, OQ is the equilibrium quantity and OP is the equilibrium price. Increase in demand implies a shift in demand curve to the right. It is indicated by D_1D_1 This sets in the following chain of effects.

Increase in demand implies that more supplied at the existing price. Given supply, price of the commodity will tend to increase from OP to OP_1 Rise in price will cause contraction of demand and extension of supply. Here, equilibrium quantity also increases from OQ to OQ_1



5. By the definition, an equilibrium price refers to the price at which market demand is equal to market supply (i.e. there is no excess demand or excess supply).

When price prevailing in the market is higher than an equilibrium price, demand will be less than supply i.e. there is excess an supply in the market. Excess supply will force the market price to slide down causing an extension of demand and contraction of supply. The process of an extension and contraction would continue till the equilibrium between supply and demand is struck. Thus, an equilibrium price will be restored through the free play of market forces.

No, the price with excess supply is not an equilibrium price. This can be illustrated with the help of the given diagram.

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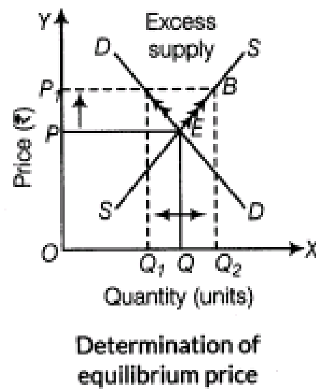

Determination of equilibrium price

6. (i) Higher than an equilibrium price:

When price prevailing in the market is higher than that of equilibrium price, demand will be less than supply i.e. there is excess supply in the market. Excess supply will force the market price to slide down causing extension of demand and contraction of supply. The process of an extension and contraction would continue till the equilibrium between supply and demand is struck.

Thus, an equilibrium price will be restored through the free play of market forces of demand and supply.

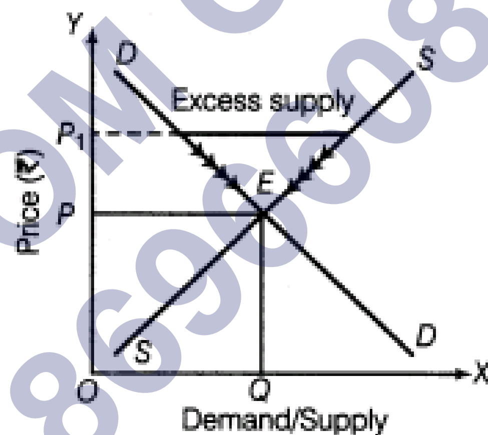

Diagram showing the situation of excess supply

(ii) Lower than an equilibrium price: In a situation of excess demand, consumers are willing to buy greater amount of a commanty than what the producers are willing to sell. Accordingly, price of the commodity will be pushed up. This will cause expansion of supply and contraction of demand. This process will continue till demand becomes equal to supply and the equilibrium is struck in the market. The market will reach the point of an equilibrium at a higher price than in a situation of $n excess demand.

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