CHAPTER 5

Market Equilibrium

Exercise Questions

Question 1. Explain market equilibrium.
Answer: Market equilibrium refers to the situation when market demand is equal to the market supply.

Question 2. What will happen if the price prevailing in the market is
(i) Above the equilibrium price?
(ii) Below the equilibrium price?

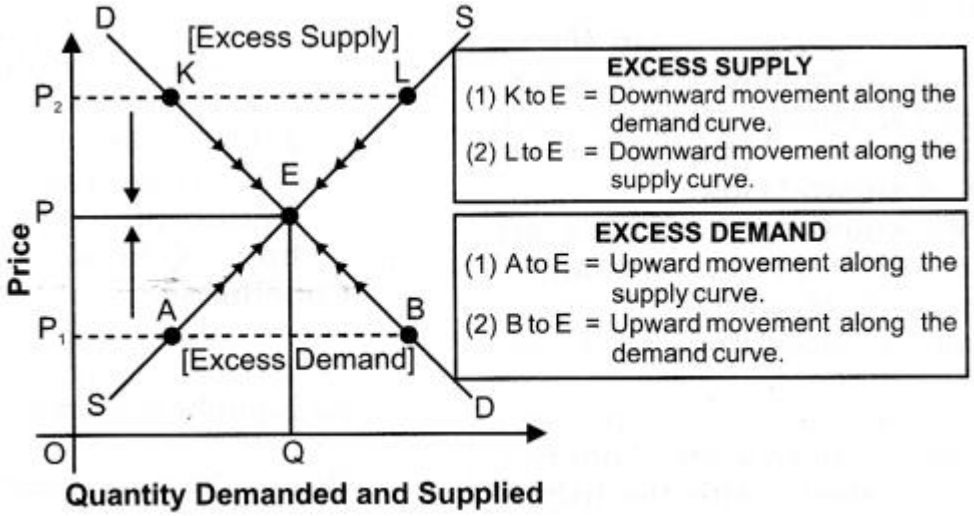
Answer:

1. Market equilibrium refers to that point which has come to be established under a given condition of demand and supply and has a tendency to stick to that level, i.e. where Demand = Supply.
2. If due to some disturbance we divert from our position the economic forces will work in such a manner that it could be driven back to its original position, i.e., where Demand = Supply. In short it is the position of rest.

It can be explained with the help of following schedule and diagram:
(a) • In the below schedule market equilibrium is determined at Price 3 where Market demand is equal to Market Supply.
• At price 1 and 2, there is excess demand, which leads to rise in price, resulting tendency is expansion in supply.
• Similarly, at price 4 and 5, there is excess supply, which leads to fall in price, resulting tendency is Contraction in supply.

Price (₹)	Demand (Units)	Supply (Units)	Surplus (+) or Shortage(-)	Resulting Tendency
1	5	1	(-) 4	Expansion
2	4	2	(-) 2	Expansion
3	**3**	**3**	**0**	**Market Equilibrium**
4	2	4	(+) 2	Contraction
5	1	5	(+) 4	Contraction

(b) • In the given diagram, price is measured on vertical axis, whereas quantity demanded and supply is measured on horizontal axis.



• Suppose that initially the price in the market is P1. At this price, the consumer demand P1B and the producer supply P1A, i.e. consumers want more than what the producer are willing to supply. There is excess demand equal to AB. So, price cannot stay on P1 as excess demand will create competition among the buyers and push the price up till we reach equilibrium. Due to rise in price from P1 to P, there is upward movement along the supply curve (expansion in supply) from A to E and upward movement along the demand curve (contraction in demand) from B to E.

• Similarly, at price P2, the quantity demanded P2K is less than the quantity supplied P2L. There is excess supply, equal to KL, which will create competition among the sellers and lower the price. The price will keep falling as long as there is an excess supply.

Due to fall in price from P2 to P there is downward movement along the supply curve (contraction in supply) from L to E and downward movement along the demand curve (expansion in demand) from K to E.

• The situation of zero excess demand and zero excess supply

defines market equilibrium (E). Alternatively, it is defined by the equality between quantity demanded and quantity supplied. The price P is called equilibrium price and quantity Q is called equilibrium quantity.

Question 3. When do we say there is excess demand for a commodity in the market?
Answer: When Market price is below the equilibrium price, then at that given price, demand is greater than supply, which leads to excess demand.

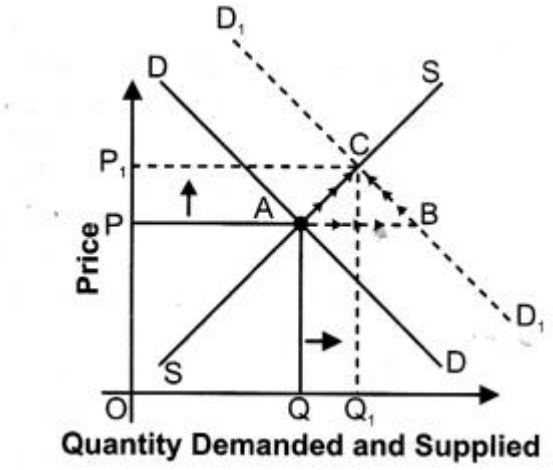
Question 4. When do you say there is excess supply for a commodity in the market?
Answer: When Market price is above the equilibrium price, then at that given price, demand is lesser than supply, which leads to excess supply.

Question 5. How are equilibrium price and quantity affected when income of the consumers

1. **Increase?**
2. **Decrease?**

Answer:

1. **Increase in Income:** When income increases, demand curve will shift to rightward in case of Normal good as shown below:
   (a) As, we know normal goods are those whose quantity demanded varies positively with the change in income. As income of a consumer rises and goods consumed is normal goods equilibrium price and equilibrium quantity both rise. It can be shown with the help of the given figure.



(b) In the given figure, price of normal goods is measured on vertical axis and quantity demanded and supplied are measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.

(c) But as given in the examination problem when income of a consumer rises the demand of normal goods increases shifting the demand curve to the right from DD to D1D1.

(d) With new demand curve DJDJ, there is excess demand at initial price OP because at price OP demand is PB and supply is PA; so there is excess demand of AB at price OP.

(e) Due to this excess demand, competition among the consumer will raise the price. With the rise in price there is upward movement along the demand curve (contraction in demand) from B to C and similarly, there is upward movement along the supply curve (expansion in supply) from A to C . So, finally, equilibrium price rises from OP to OPi; and equilibrium quantity also rises from OQ to OQr

Conclusion

Due to increase in income of a buyer

for normal goods,

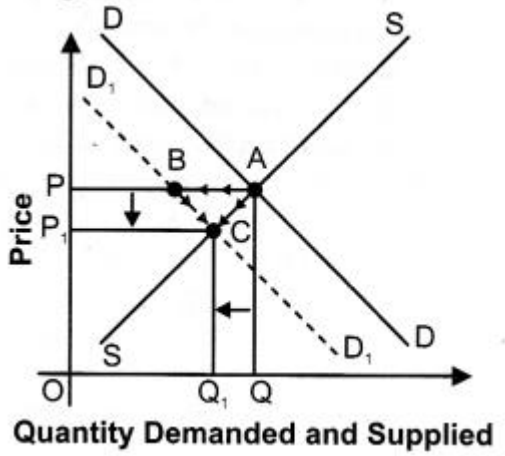
(a) Equilibrium price rises from OP to OP1.

(b) Equilibrium quantity also rises from OQ to OQ1.

2. **Decrease in income:** When income decreases, demand curve will shift to leftward in case of Normal good as shown below:

(a) As we know that normal goods are those whose quantity demanded varies positively with the change in income. As given in the examination problem if income of a consumer falls and goods consumed is normal goods, then both equilibrium price

and the equilibrium quantity fall. It can be shown with the help of the given figure.



(b) In the given figure price of normal goods is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.

(c) But as given in the examination problem when income of a consumer falls the demand of normal goods also falls shifting the demand curve to the left from
DD to D1D1.

(d) With new demand curve D1D1 there is excess supply at initial price OP because at price OP demand is PB and supply is PA; so there is excess supply of AB at price OP.

(e) Due to this excess supply competition among the producer will fall the price. Due to fall in price there is downward movement along the demand curve (Expansion in demand) from B to C and similarly, there is downward movement along the supply curve (Contraction in supply) from A to C. So, finally, the equilibrium price falls from OP to OP1 and equilibrium quantity also falls from OQ to OQ1

Conclusion

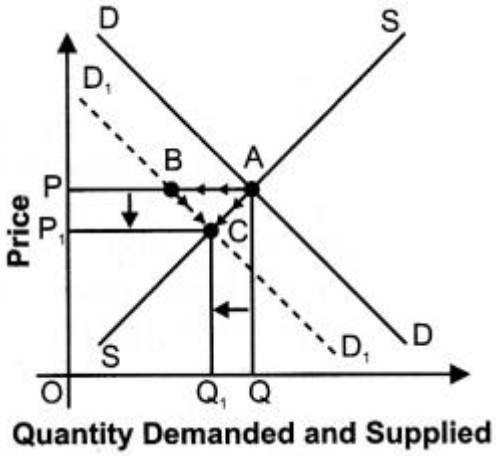
Due to decrease in income of a buyer for normal goods,

1. Equilibrium price falls from OP to OP1.
2. Equilibrium quantity also falls from OQ to OQ1.

Question 6. Using supply and demand curves, show how an increase in the price of shoes affects the price of a pair of socks and the number of pairs of socks bought and sold.

Answer:

1. As we know, shoes and pair of socks are complementary good to each other. As, price of complementary goods are inversely related with the demand of given commodity. So, rise in price of shoes (complementary good) decreases the demand for given commodity (pair of socks), and demand curve shifts leftward as shown in given figure:



2. In the given diagram, price is on vertical axis and quantity demanded and supplied is on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.
3. But due to rise in price of complementary good the demand curve of given commodity shifts leftward from DD to D1D1.
4. With new demand curve D1D1 there is excess supply at initial price OP because at price OP demand is PB and supply is PA; so, there is excess supply of AB at price OP.
5. Due to this excess supply, competition among the producer will fall the price. Due to fall in price, there is downward movement along the demand curve (Expansion in demand) from B to C and similarly there is downward movement along the supply curve (Contraction in supply) from A to C. So, finally, the equilibrium price falls from OP to OP1 and equilibrium quantity also falls from OQ to OQ1 So, due to rise in price of complementary goods,

(a) Equilibrium price falls from OP to OP1 and
(b) Equilibrium quantity also falls from OQ to OQ1

2MARKS

Question 1. Define market equilibrium.
Answer: Market equilibrium refers to the situation when market demand is equal to the market supply.

Question 2. Give the meaning of equilibrium price.
Answer: The price at which equilibrium is reached is called equilibrium price.

Question 3. Give the meaning of equilibrium quantity.
Answer: The quantity bought and sold at the equilibrium price is called equilibrium quantity.

Question 4. What is equilibrium point?
Answer: Equilibrium point is the point of intersection of the demand curve and supply of commodity.

Question 5. When do you say there is excess demand for a commodity in the market?
Answer: When Market price is below the equilibrium price, then at that given price, demand is greater than supply that leads to excess demand.

Question 6. When do you say there is excess supply for a commodity in the market?
Answer: When market price is above the equilibrium price, then at that given price, demand is lesser than supply, that leads to excess supply.

Question 7. For a non-viable industry where does the supply curve lie relative to demand curve?
Answer: Supply curve lies above the demand curve.

Question 8. A severe drought results in a drastic fall in the output of wheat. Analyse how will it affect the market price of wheat?
Answer: Market price of wheat will increase (due to decrease in supply).

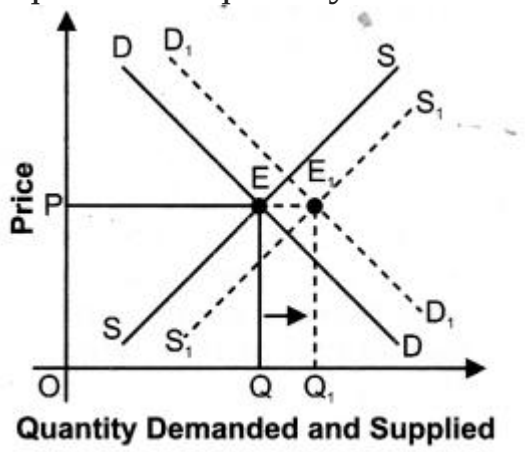
Question 9. What happens to equilibrium price of a commodity if there is 'decrease' in its demand and 'increase' in its supply?
Answer: Equilibrium price will fall.

Question 10. What happens to equilibrium price of a commodity if there is an 'increase' in its demand and 'decrease' in its supply?
Answer: Equilibrium price will increase.

5MARKS

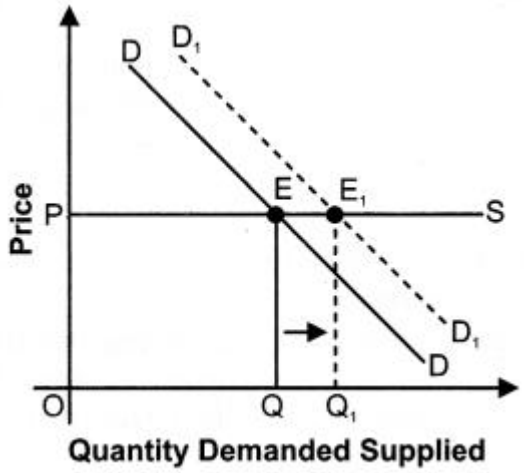
Question 1. Under what condition increase in demand would not make any effect on equilibrium price?
Answer: Case I: When supply also increase at the same rate as the demand increases
In the given diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ. But when "demand and supply both increase at the same rate" then,

1. Equilibrium price remains – constant at OP; and
2. Equilibrium quantity rises from OQ to OQ1



Case II: When supply becomes perfectly elastic – In the given diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ. But when "supply becomes perfectly elastic and demand increases then,

1. Equilibrium price remains constant at OP; and
2. Equilibrium quantity rises from OQ to OQ1



Question 2. Under what condition increase in demand would not make any effect on equilibrium quantity?

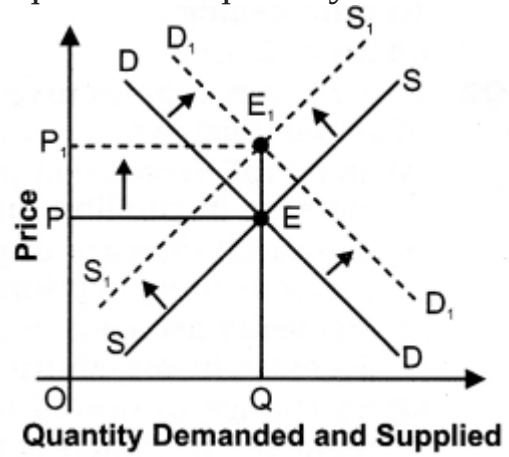
Answer: Case I: When supply decreases at the same rate as the demand increase

In the given diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.

But when, "demand increases and supply decreases but at the same rate", then,

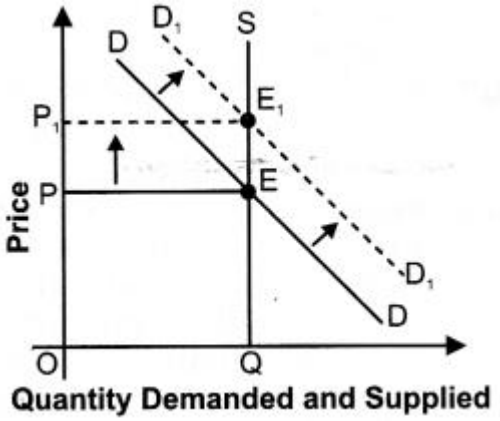
1. Equilibrium price rises from OP to OP1 and

2. Equilibrium quantity remains constant at OQ.



Case II: When supply becomes perfectly inelastic
In the given diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.
But when "supply becomes perfectly inelastic and demand increase" then,

1. Equilibrium price rises from OP to OP1 and
2. Equilibrium quantity remains constant at OQ.



Question 3. Give reasons for the following statements:

1. **A decrease in supply will not result in a change in equilibrium quantity if the demand for a commodity is perfectly inelastic.**
2. **An decrease in supply will not result in a change in equilibrium price if the demand for a commodity is perfectly elastic.**

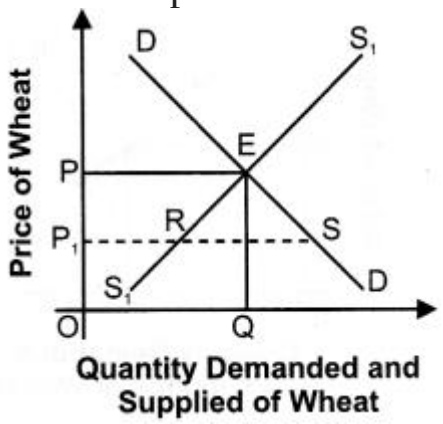
Answer:

1. If the demand for a commodity is perfectly inelastic, i.e., if the demand curve is a vertical straight line, a decrease in supply curve will result only in a change in the equilibrium price, but no change in the equilibrium quantity.
2. If the demand for a commodity is perfectly elastic, i.e., if the demand curve is a horizontal straight line, a decrease in supply curve will result only in change equilibrium quantity, but no change in equilibrium price.

Question 4. Explain the effects of a 'price ceiling'.

Answer:

1. When the government imposed upper limit on the price (maximum price) of a good or service which is lower than equilibrium price is called price ceiling.
2. Price ceiling is generally imposed on necessary items like wheat, rice, kerosene etc.
3. It can be explained with the help of diagram below:



(a) In the given diagram, DD is the market demand curve and SS is the market supply curve of Wheat. Suppose, equilibrium price OP is very high for many individuals and they are unable to afford at this price.

(b) As wheat is necessary product, government has to intervene and impose price ceiling of Pi; which is below the equilibrium level.

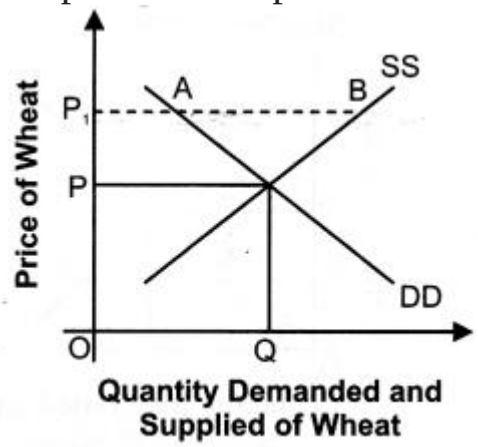
(c) Since this price is below equilibrium price, there is excess

demand in the market. With shortages, sellers tend to hoard the product. It could also lead to black marketing.

Question 5. Explain the effects of a 'price floor'.

Answer:

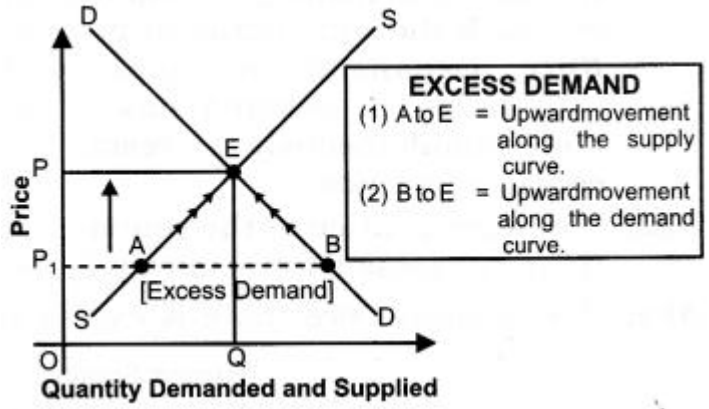
1. When the government imposed lower limit on the price (minimum price) that may be charged for a good or service which is higher than equilibrium price is called price floor.
2. Price Floor is generally imposed on agricultural price support programmes and the minimum wage legislation.
3. Since this price is above equilibrium price, there is excess supply in the market. Since there is surplus, sellers can attempt to sell their product at a price below the floor price.



7MARKS

Question 1. If at a given price of the commodity there is excess demand, how will the equilibrium price be reached? Explain with the help of a diagram.

Answer: If at a given price let at P1(there is excess demand as shown in the given figure.



In the given diagram the excess demand of AB at price P , creates a competition among the buyers, which will increase the price from P, to P. It can be explained in the following two cases:

Case I: Upward movement along the supply curve (Expansion in Supply) ,

Due to excess demand of AB, competition among the buyers, will rise the price from Pt to P. As we know positive relationship exist between price and quantity supplied- So, the rise in price from P1 to P, will rise the supply from A to E.

Case II: Upward movement along the demand curve (Contraction in Demand)

Due to excess demand of AB, the price rises. As we know Inverse relationship exists between price and quantity demanded. So, due to rise in price from P to P the quantity demanded falls from B to E.

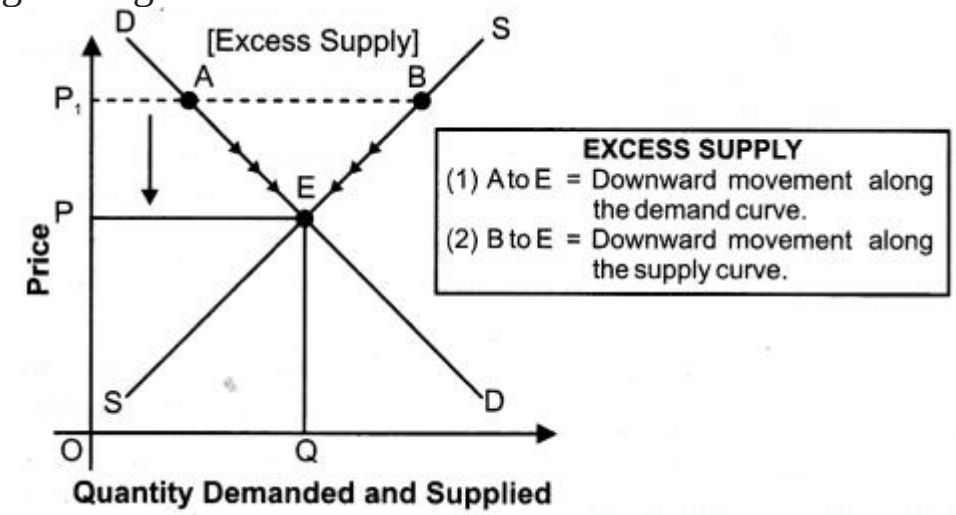
It can also be explained with the help of the schedule that follows:

Price ₹	Demand	Supply	Resulting tendency
1	5	1	Excess Demand
2	4	3	Excess Demand
3	3	3	Equilibrium

In the above schedule, at price 1 there is an excess demand. Due to this excess demand price will rise till we reach the equilibrium at price 3. Note: Expansion in supply and contraction in demand has to be done simultaneously to reach the equilibrium price.

Question 2. If at a given price of the commodity there is excess supply, how will the equilibrium price be reached? Explain with the help of a diagram.

Answer: If at a given price there is excess supply as shown in the given figure.



In the given figure, the excess supply of AB at price P1 will create a competition among the producers, which will reduce the price from Pj to P. It can be explained in the following cases:

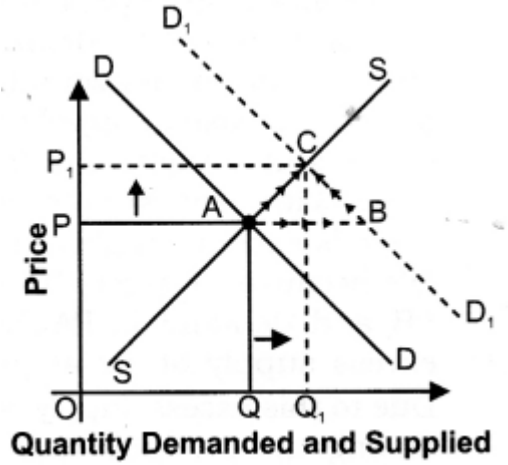
1. Downward movement along the supply curve (Contraction in supply): Due to excess supply of AB, the competition among the producers will reduce the price. As we know, positive relationship exists between price and quantity supplied. So fall in price P1 to P leads to fall in supply from B to E.
2. Downward movement along the demand curve (Expansion in demand): Due to excess supply of AB, the competition among the producers will reduce the price. As we know inverse relationship exits between price and quantity demanded. So, fall in price from P1 to P, leads to rise in demand from A to E. It can be explained with the help of the following schedule.

Price ₹	Demand	Supply	Resulting tendency
5	1	5	Excess Demand
4	2	4	Excess Demand
3	3	3	Equilibrium

In the above schedule at price 5, there is excess supply. This excess supply, leads to fall in price till we reach the equilibrium at price 3. **Note:** Contraction in supply and expansion in demand have to be done simultaneously to reach the equilibrium.

Question 3. Market for a good is in equilibrium. There is increase in demand for goods. Explain the chain of effects of this change. Use diagram.

Answer: As given in the examination problem that market for a good is in equilibrium. So, we assume that initial price is OP as shown in the figure.



In the given figure price is on vertical axis and quantity demanded and supplied are on horizontal axis. But due to increase in demand, demand curve shifts rightward from DD to D1D1 With new demand curve D1D1, there is excess demand at initial price OP because at price OP, demand is PB and supply is PA, so there is excess demand of AB at price OP.

Due to this excess demand, competition among the consumer will rise the price. With the rise in price, there is upward movement along the demand curve (contraction in demand) from B to C and similarly, there is upward movement along the supply curve (expansion in supply) from A to C . So, finally equilibrium price rises from OP to OP1; and equilibrium quantity also rises from OQ to OQ1 Conclusion Due to increase in demand,

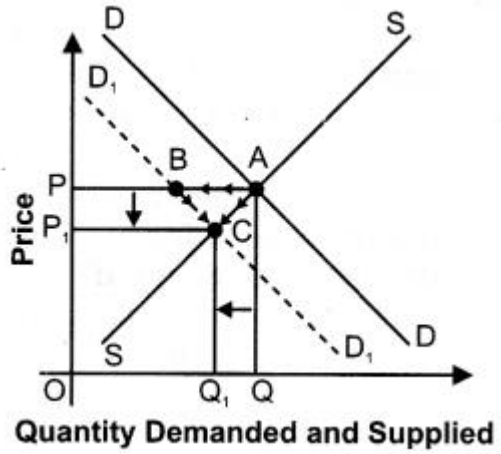
1. Equilibrium price rises from OP to OP1
2. Equilibrium quantity also rises from OQ to OQ1

Question 4. Market for a good is in equilibrium. There is decrease in demand for this good. Explain the chain of effects of this change. Use diagram.

Answer: As given in the examination problem that market for a good is in equilibrium. So, we assume that initial price is OP as shown in given figure.

In the given figure price is on vertical axis and quantity demanded and supplied are on horizontal axis. But due to decrease in demand, the demand curve shifts leftward from DD to D1D1. With new demand curve D1D1, there is excess supply at initial price OP because at price OP demand is PB and supply is PA so there is excess supply of AB at price OP.

Due to this excess supply, competition among the producer will make the price fall. Due to fall in price there is downward movement along the demand curve (Expansion in demand) from B to C and similarly there is downward movement along the supply curve (contraction in supply) from A to C. So, finally, the equilibrium price falls from OP to OP1 and equilibrium quantity also falls from OQ to OQ1.



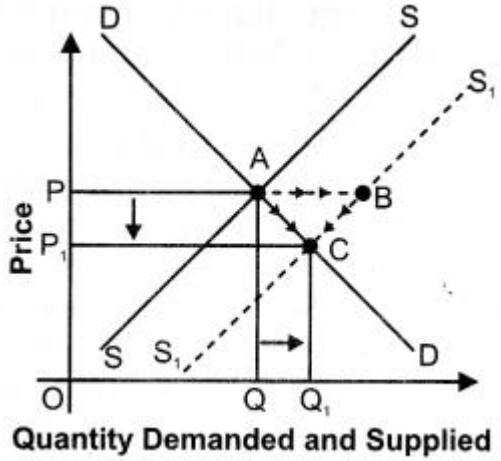
Conclusion

Due to decrease in demand,

1. Equilibrium price falls from OP to OP1
2. Equilibrium quantity also falls from OQ to OQ1

Question 5. Market for a good is in equilibrium. There is increase in supply for this goods. Explain the = chain of effects of this change. Use diagram.

Answer: As given in the examination problem that market for a good is in equilibrium. So, we assume that initial price is OP as shown in given figure.



In the given figure price is on vertical axis and quantity demanded and supplied is on horizontal axis. But due to increase in supply the supply curve shifts rightward from SS to S1S1. With new supply curve S1S1(there is excess supply at initial price OP because at price OP, supply is PB and demand is PA, so there is excess supply of AB at price OP. Due to this excess supply competition among the producer will make the price fall. Due to this fall in price there is downward movement along the supply curve (Contraction in supply) from B to C and similarly, there is downward movement along the demand curve (Expansion in demand) from A to C. So, finally, equilibrium price falls from OP to OP1 and equilibrium quantity rises from OQ to OQ1.

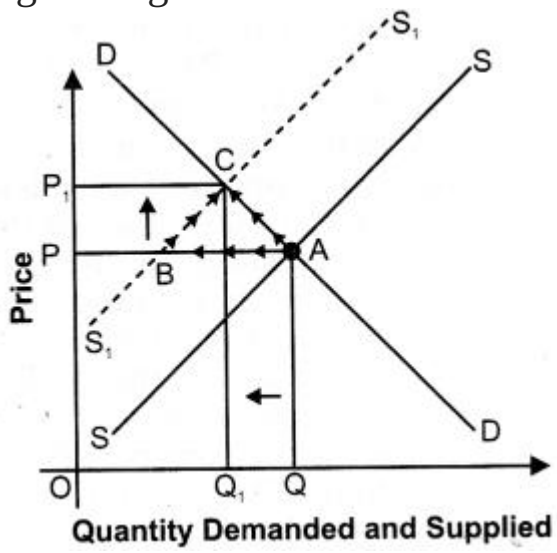
Conclusion

Due to increase in supply,

1. Equilibrium price falls from OP to OP1
2. Equilibrium quantity rises from OQ to OQ1.

Question 6. Market for a good is in equilibrium. There is decrease in supply for this good. Explain the chain of effects of this change. Use diagram.

Answer: As given in the examination problem that market for a good is in equilibrium. So,-we assume that initial price is OP as shown in the given figure.



In the given figure price is on vertical axis and quantity demanded and supplied is on horizontal axis. But due to decrease in supply the supply curve shifts leftward from SS to S1S1. With new supply curve S1S1, there is excess demand at initial price OP because at price OP, supply is PB and demand is PA, so there is excess demand of AB at price OP.

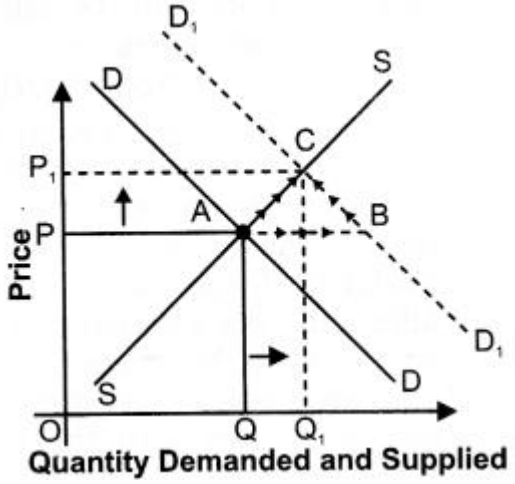
Due to this excess demand competition among the consumer will rise the price. Due to this rise in price there is upward movement along the supply curve (Expansion in supply) from B to C and similarly, there is upward movement along the demand curve (Contraction in demand) from A to C. So, finally, equilibrium price rises from OP to OP1 and equilibrium quantity falls from OQ to OQ1 Conclusion

Due to decrease in supply,

1. Equilibrium price rises from OP to OP1
2. Equilibrium quantity falls from OQ to OQ1.

7. How is the equilibrium price and equilibrium quantity of a normal commodity affected by an increase in the income of its buyers? Explain with the help of a diagram.

Answer: As, we know normal goods are those whose quantity demanded varies positively with the change in income. As given in the examination problem if income of a consumer rises and goods consumed is normal goods equilibrium price and equilibrium quantity both rise. It can be shown with the help of the given figure.



In the given figure, price of normal goods is measured on vertical axis and quantity demanded and supplied are measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ. But as given in the question when income of a consumer rises the demand of normal goods increases shifting the demand curve to the ‘ right from DD to D1D1.

With new demand curve D1D1, there is excess demand at initial price OP because at price OP demand is PB and supply is PA; so there is excess demand of AB at price OP.

Due to this excess demand, competition among the consumer will raise the price. With the rise i« price there is upward movement along the demand curve (contraction in demand) from B to C and similarly, there is upward movement along the supply curve (expansion in supply) from A to C . So, finally, equilibrium price rises from OP to OP1; and equilibrium quantity also rises from OQ to OQ1.

Conclusion

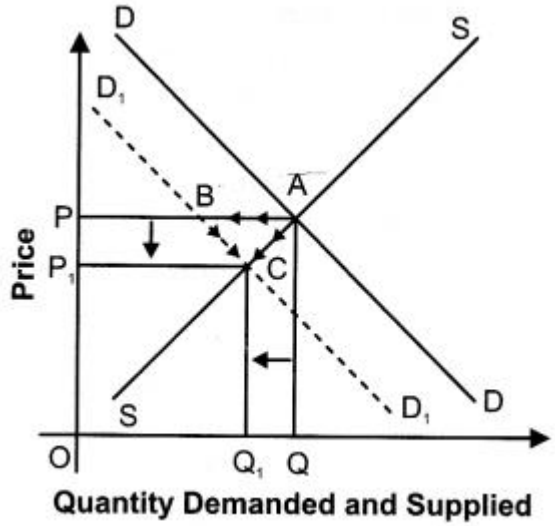
Due to increase in income of a buyer for normal goods,

1. Equilibrium price rises from OP to OP1
2. Equilibrium quantity also rises from OQ to OQ1

Question 8. How does the equilibrium price of a 'normal' commodity change when income of its buyers fall? Explain the chain of effects.

Answer: As we know that normal goods are those whose quantity demanded varies positively with the change in income. As given in the examination problem if income of a consumer falls and goods consumed is normal goods, then both equilibrium price and the equilibrium quantity fall. It can be shown with the help of the given figure.

In the given figure price of normal goods is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.



But as given in the examination problem when income of a consumer falls the demand of normal goods also falls shifting the demand curve to the left from DD to D1D1.

With new demand curve D1D1 there is excess supply at initial price OP because at price OP demand is PB and supply is PA; so there is excess supply of AB at price OP.

Due to this excess supply competition among the producer will fall the price. Due to fall in price there is downward movement along the demand curve (Expansion in demand) from B to C and similarly, there is downward movement along the supply curve (Contraction in supply) from A to C. So, finally, the equilibrium price falls from OP to OP1 and equilibrium quantity also falls from OQ to OQ1

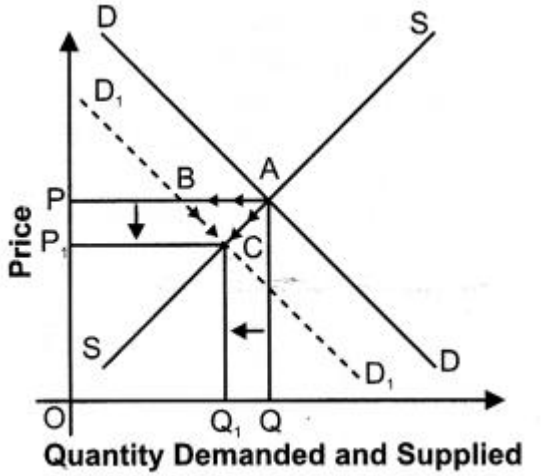
Conclusion

Due to decrease in income of a buyer for normal goods,

(1) Equilibrium price falls from OP to OP1
(2) Equilibrium quantity also falls from OQ to OQ1

Question 9. How will an increase in the income of buyers of an 'inferior goods', affect its equilibrium price and equilibrium quantity? Explain with the help of a diagram.

Answer: As we know inferior goods are those whose quantity demanded varies inversely with the change in income. As given in the examination problem if income of a consumer increases and good consumed is inferior good, equilibrium price and equilibrium quantity both fall. It can be shown with the help of the following figure. In the given figure price of inferior goods is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.



But as given in the examination problem when income of a consumer increases, the demand of inferior goods also falls shifting the demand curve to the left from DD to D1D1 With new demand curve D1D1, there is excess supply at initial price OP because at price OP demand is PB and supply is PA; so, there is excess supply of AB at price OP. Due to this excess supply, competition among the producer the price fall. Due to fall in price, there is downward movement along the demand curve (Expansion in demand) from B to C and similarly, there is downward movement along the supply curve (Contraction in supply) from A to C. So, finally, the equilibrium price falls from OP to OP1, and equilibrium quantity also falls from OQ to OQ1

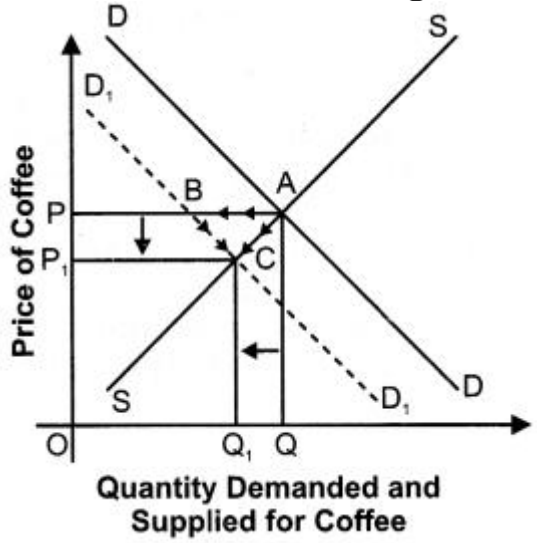
Conclusion

Due to increase in income of buyer for inferior goods,

1. Equilibrium price falls from OP to OP1
2. Equilibrium quantity also falls from OQ to OQ1

Question 10. How will a fall in price of tea affect the equilibrium price of coffee? Explain the chain of effects.

Answer: Due to fall in price of tea the demand curve for coffee shifts leftward as shown in the given figure.



In the given diagram price of coffee is on vertical axis and quantity demanded and supplied is on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.

But due to fall in price of tea the demand curve of coffee shifts leftward from DD TO D1D1.

With new demand curve D1D1 there is excess supply at initial price OP because at price OP demand is PB and supply is PA; so, there is excess supply of AB at price OP.

Due to this excess supply competition among the producer will make the price fall. Due to fall in price, there is a downward movement along the demand curve (Expansion in demand) from B to C, and similarly there is a downward movement along the supply curve (Contraction in supply) from A to C. So, finally, the equilibrium price falls from OP to OP1, and equilibrium quantity also falls from OQ to OQ1 So, due to fall in price of Tea,

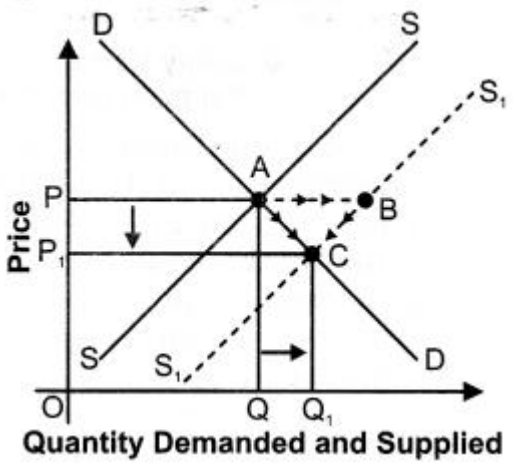
1. Equilibrium price of coffee falls from OP to OP1, and
2. Equilibrium quantity of coffee also falls from OQ to OQ1.

Question 11. What will be the effect on equilibrium price and equilibrium quantity, when:

1. **number of firms increases and**
2. **price of inputs increases.**

Answer:

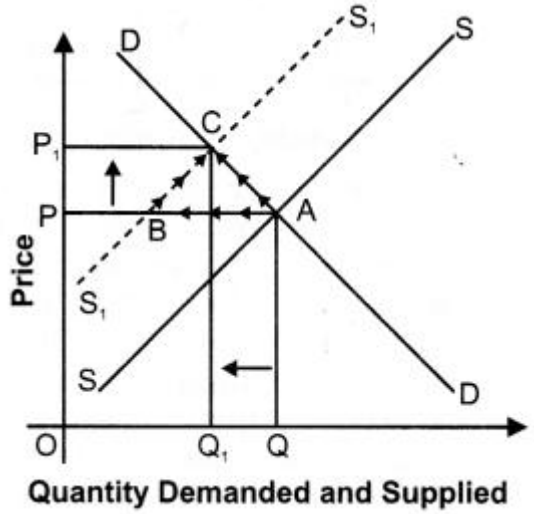
1. **Number of firms increases:**
   When number of firms increase keeping other factors constant, total supply, in the market, also increases due to more producers producing the commodity. It shifts the supply curve towards right. Since an increase in number of firms does not have any impact on demand the demand curve remains unchanged. It can be shown with the help of given diagram.



   The supply curve shifts rightward from SS to S1S1 With new supply curve S1S1 there is excess supply at initial price OP because at price OP supply is PB and demand is PA; so there is excess supply of AB at price OP.
   Due to this excess supply, competition among the producer will fall the price. Due to this fall in price there is downward movement along the supply curve (Contraction in supply) from B to C and similarly there is downward , movement along the demand curve (Expansion in demand) from A to C. So, finally, equilibrium price falls from OP to OP1, and equilibrium quantity rises from OQ to OQ1
   Conclusion
   So, due to increase in number of firms,

(a) Equilibrium price falls from OP to OP1
(b) Equilibrium quantity rises from OQ to OQ1

2. Price of inputs increases: When price of inputs increases, assuming no change in other factors, then the cost of production rises. As a result, supply decreases due to fall in the profitability level. It shifts the supply curve towards left.
   Since an increase in the price of inputs does not have any impact on demand, the demand curve remains unchanged. It can be shown with the help of given diagram.



   In the given figure price is on vertical axis and quantity demanded and supplied is on horizontal axis.
   The supply curve shifts leftward from SS to S1S1 With new supply curve S1S1, there is excess demand at initial price OP because at price OP, supply is PB and demand is PA, so there is excess demand of AB at price OP.
   Due to this excess demand, competition among the consumer will rise the price. Due to this rise in price, there is upward movement along the supply curve (Expansion in supply) from B to C and similarly, there is upward movement along the demand curve (Contraction in
   demand) from A to C. So, finally, equilibrium price rises from OP to OP, and equilibrium quantity falls from OQ to OQ1

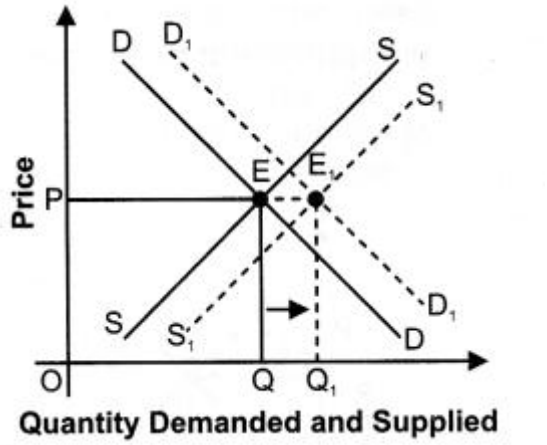
Conclusion
Due to increase in input price,

1. Equilibrium price rises from OP to OP1.

2. Equilibrium quantity also falls from OQ to OQ1.

Question 12. What would be an effect on equilibrium price and quantity when demand and supply both increase at the same rate?

Answer: When demand and supply both increase at the same rate, equilibrium price remains constant and equilibrium quantity rises. It can be shown with the help of the following diagram.

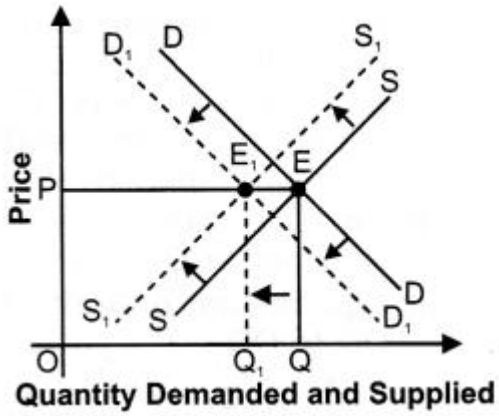


In the above diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.
But as given in the examination problem, "demand and supply both increase at the same rate", then,

1. Equilibrium price remains constant at OP and
2. Equilibrium quantity rises from OQ to OQ1

Question 13. What would be an effect on equilibrium price and equilibrium quantity if demand and supply both fall at the same rate?

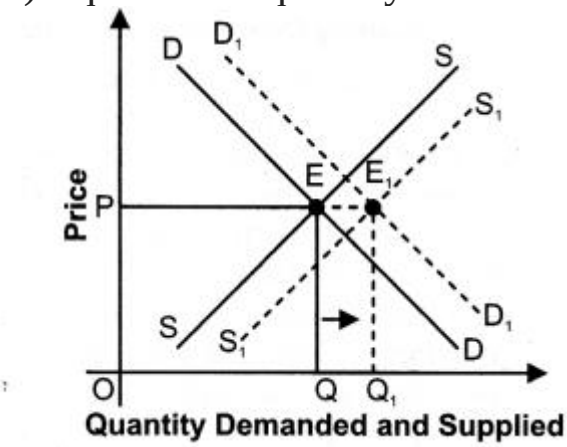
Answer: When demand and supply both decrease at the same rate, equilibrium price remains constant and equilibrium quantity falls. It can be shown with the help of the following diagram.



In the given diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ.
But as given in the examination problem, "demand and supply both decrease at the same rate", then,

1. Equilibrium price remains constant at OP and
2. Equilibrium quantity falls from OQ to OQ1.

Question 14. What would be an effect on equilibrium price and quantity when demand and supply both shifts rightward?
Answer: There are three cases:
Case I: When demand and supply both increase at the same rate In the given diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ. But when "demand and supply both increase at the same rate" then,
(i) Equilibrium price remains constant at OP and
(ii) Equilibrium quantity rises from OQ to OQ1.



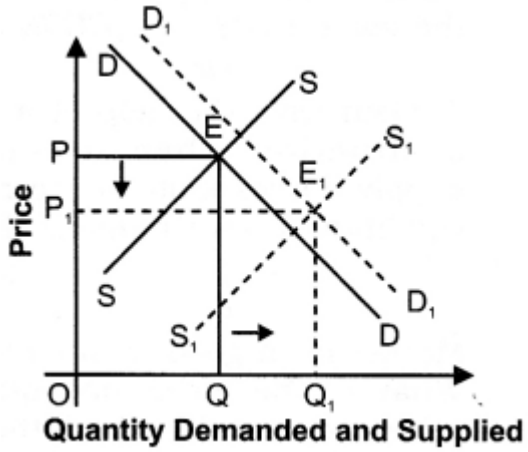
Case II: When demand increases, supply also increases but at a

much faster rate

In the given diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ. But when "demand increases and supply also increases but at a much faster rate", then,

(i) Equilibrium price falls from OP to OP1 and

(ii) Equilibrium quantity rises from OQ to OQ1.

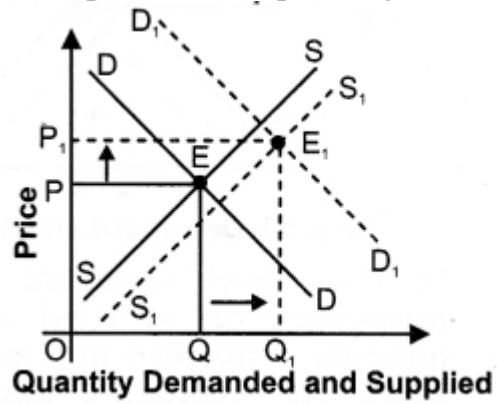


Case III: When supply increases, demand also increases but at a much faster rate

In the given diagram price is measured on vertical axis and quantity demanded and supplied is measured on horizontal axis. Initially, the equilibrium price is OP and equilibrium quantity is OQ. But when "supply increases and demand also increases but at a much faster rate" then, ,

(i) Equilibrium price rises from OP to OP1; and

(ii)Equilibrium quantity also rises from OQ to OQ1.



Multiple Choice Questions

Question 1. If price is above then equilibrium Price, there is:
(a) excess demand
(b) excess supply
(c) price ceiling
(d) price flooring
Answer: (b)

Question 2. With a given supply curve a decrease in demand causes.
(a) an overall decrease in price but an increase in equilibrium quantity.
(b) an overall increase in price but a decrease in equilibrium quantity.
(c) an overall decrease in price and a decrease in equilibrium quantity.
(d) no change in overall price but a reduction in equilibrium quantity.
Answer: (c)

Question 3. Assume that consumers' incomes and the number of sellers in the market for goods A both decrease. Based upon this information, we can conclude, with certainty, that the equilibrium
(a) price will increase.
(b) price will decrease.
(c) quantity will increase.
(d) quantity will decrease.
Answer: (d)

Question 4. Suppose that the supply of cameras increases due to an increase in imports. Which of the following statements will most likely occur?
(a) The equilibrium price of cameras will increase.
(b) The equilibrium quantity of cameras exchanged will decrease.
(c) The equilibrium price of camera film will decrease.
(d) The equilibrium quantity of camera film exchanged will

increase.
Answer: (d)

Question 5. Assume that in the market for a good Z there is a simultaneous increase in demand and the quantity supplied. The result will be:
(a) An increase in equilibrium price and quantity.
(b) A decrease in equilibrium price and quantity.
(c) An increase in equilibrium quantity and uncertain effect on equilibrium price.
(d) A decrease in equilibrium price and increase in equilibrium quantity.
Answer: (c)

Question 6. Suppose the technology for producing personal computers improves and, at the same time, individuals discover new uses for personal computers so that there is greater utilization of personal computers. Which of the following statements/factors will happen to equilibrium price and equilibrium quantity?
(a) Price will increase; quantity cannot be determined.
(b) Price will decrease; quantity cannot be determined.
(c) Quantity will increase; price cannot be determined.
(d) Quantity will decrease; price cannot be determined.
Answer: (c)

Question 7. When there is increase in demand and decrease in supply, equilibrium price:
(a) Falls (b) Rises
(c) Constant (d) None of these
Answer: (b)