

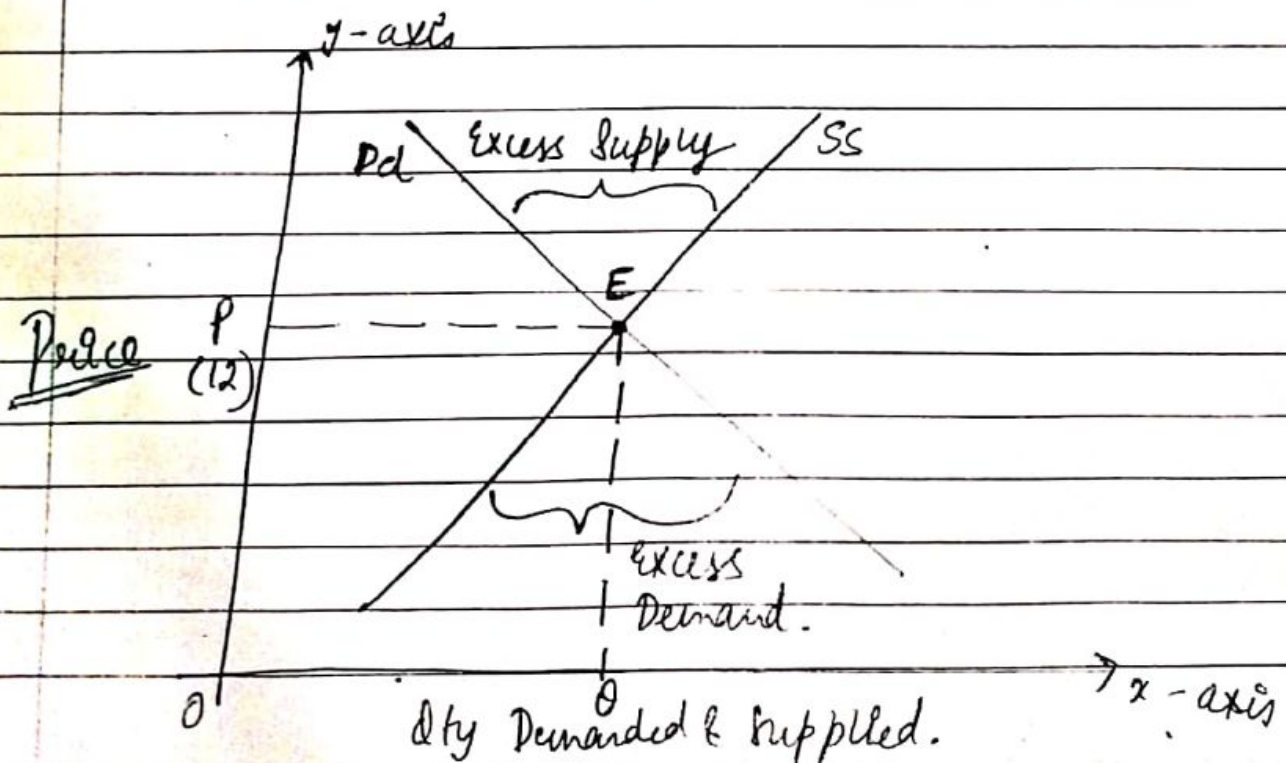
Ch - Price Determination and Simple Applications

Q1. Explain Market equilibrium under Perfect Competition.

ans1. Under Perfect competition, market equilibrium is determined when market $D_d = \text{market } S_s$. The price determined corresponding to point of equilibrium is known as equilibrium price and the qty determined corresponding to this level is known as equilibrium qty.

This can be further illustrated with the help of following schedule and diagram :-

Price of Good 'A'	Mkt D_d for Good 'A'	Mkt S_s for Good 'A'
10	100	40
11	80	50
12	60	60
13	40	70
14	20	80

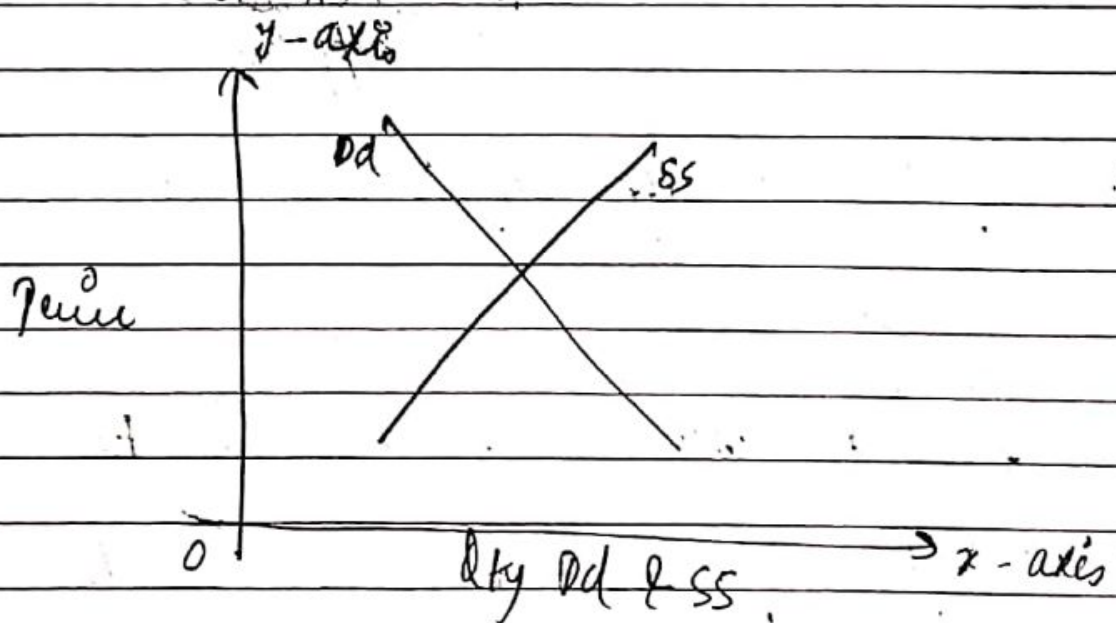


In this diagram, D_d represents the Market Demand curve and SS represents the Market supply curve. E' is the point of equilibrium where Demand = supply. OP' is the equilibrium price and OQ' is the equilibrium quantity. For any price above OP , there will be excess supply and for any price below OP , there will be excess demand.

Q2. What do you mean by Viable industry?

Ans. It refers to an industry for which supply curve and demand curve intersect each other in positive axis.

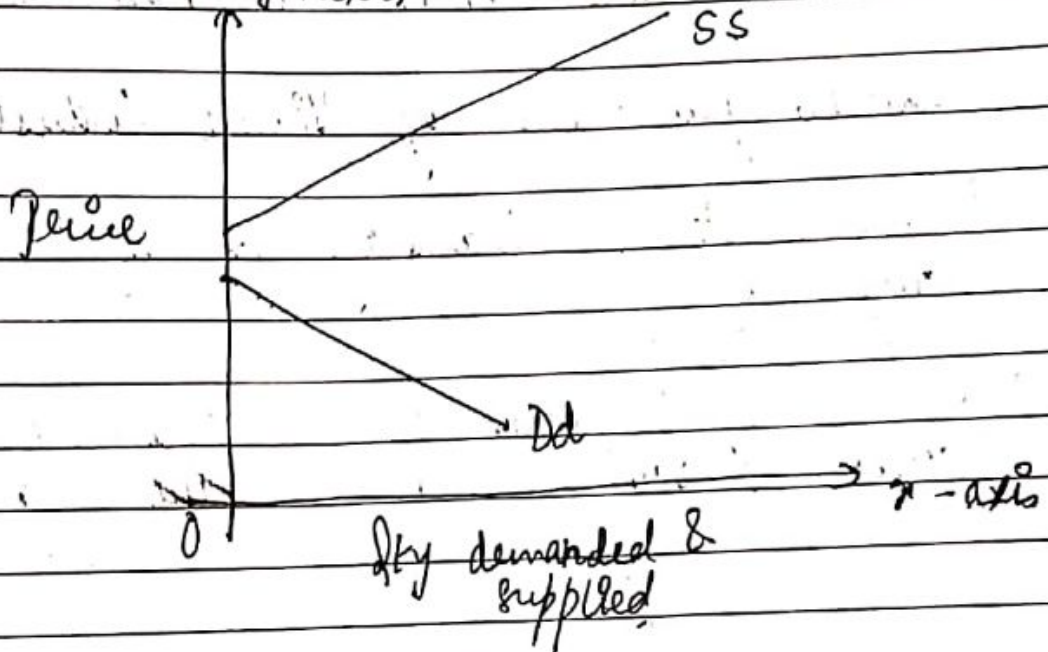
So, there is possibility to determine equilibrium price and Qty as shown in the diagram.



Q3. What is Non-Viable Industry?

It refers to an industry for which SS curve and D_d curve never intersect each other in the positive axis. The SS curve

lies above the Dd curve. Since the price is too high for the customers of this kind of situation arises when price at which producers are ready to produce is so high that consumers are not willing to buy even a single unit. This industry is shown through the following diagram:-



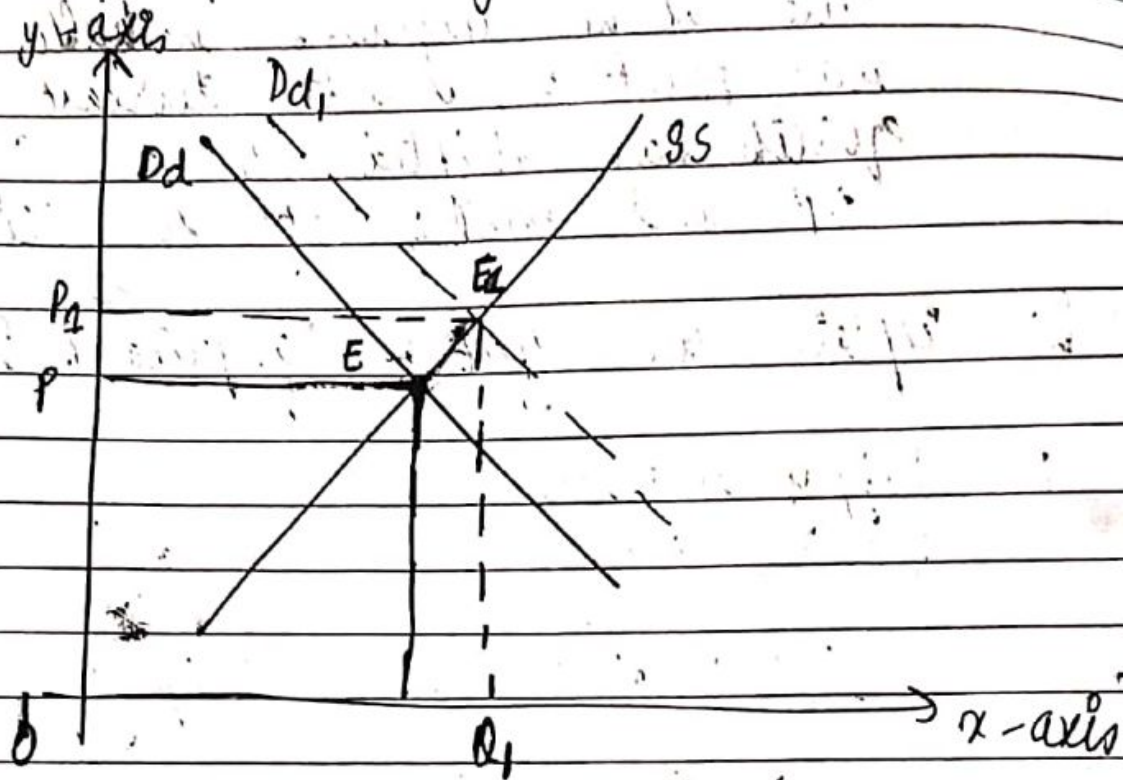
Q4. Explain the effect of :-

1. Increase in Dd
 2. Decrease in Dd
- on equilibrium price and Qty

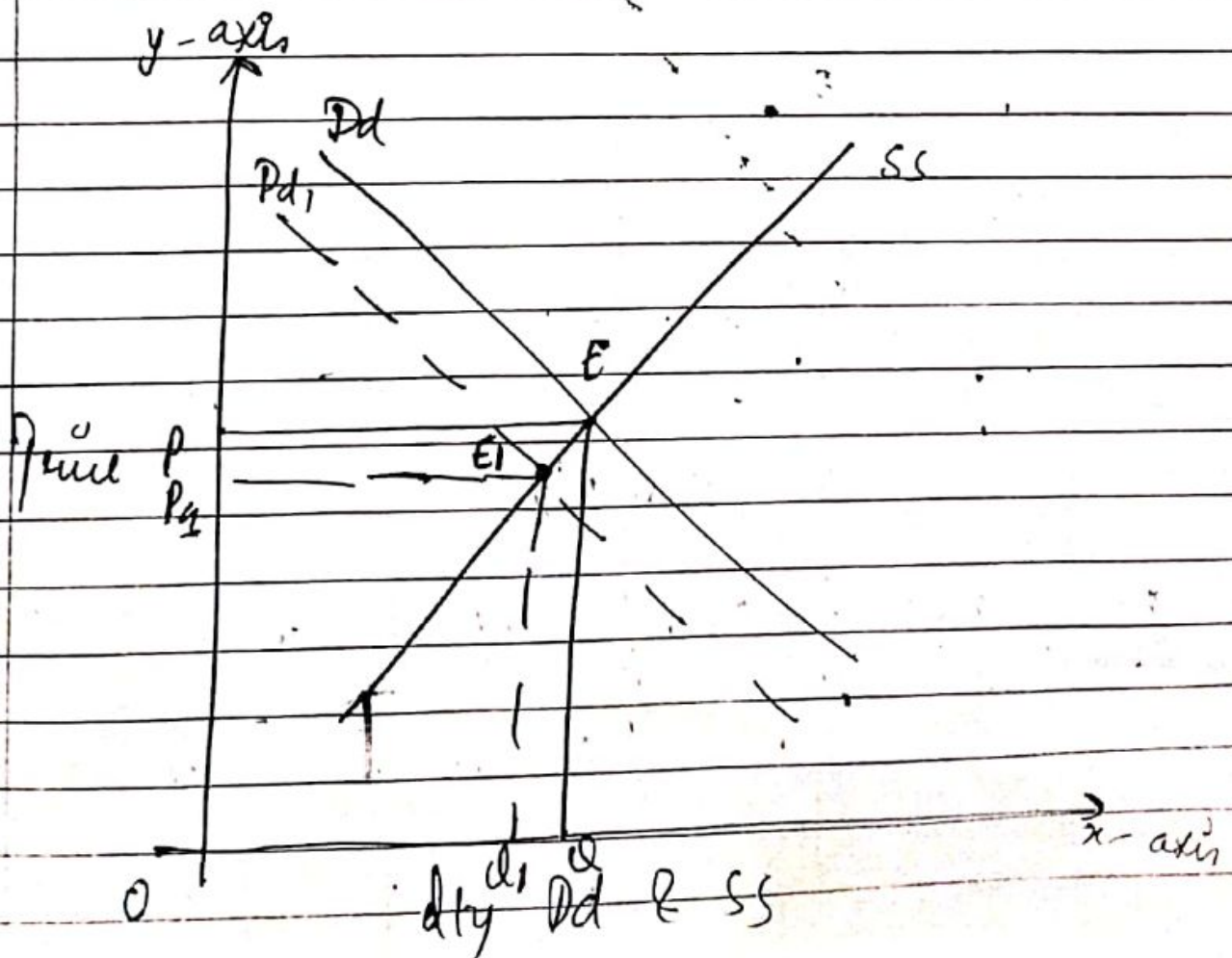
ans4. 1. Effect of Increase in Demand

In a market which is currently at equilibrium, if Demand increases, the equilibrium price and quantity, both will increase. As shown in the diagram below with the initial Dd and SS , the equilibrium was 'E'.

Price DP and Qty was OD . With increase in demand from Dd to Dd_1 , equilib has shifted to E_1 .
 Price to OP_1 and qty to OQ_1 .



2. Effect of decrease in demand

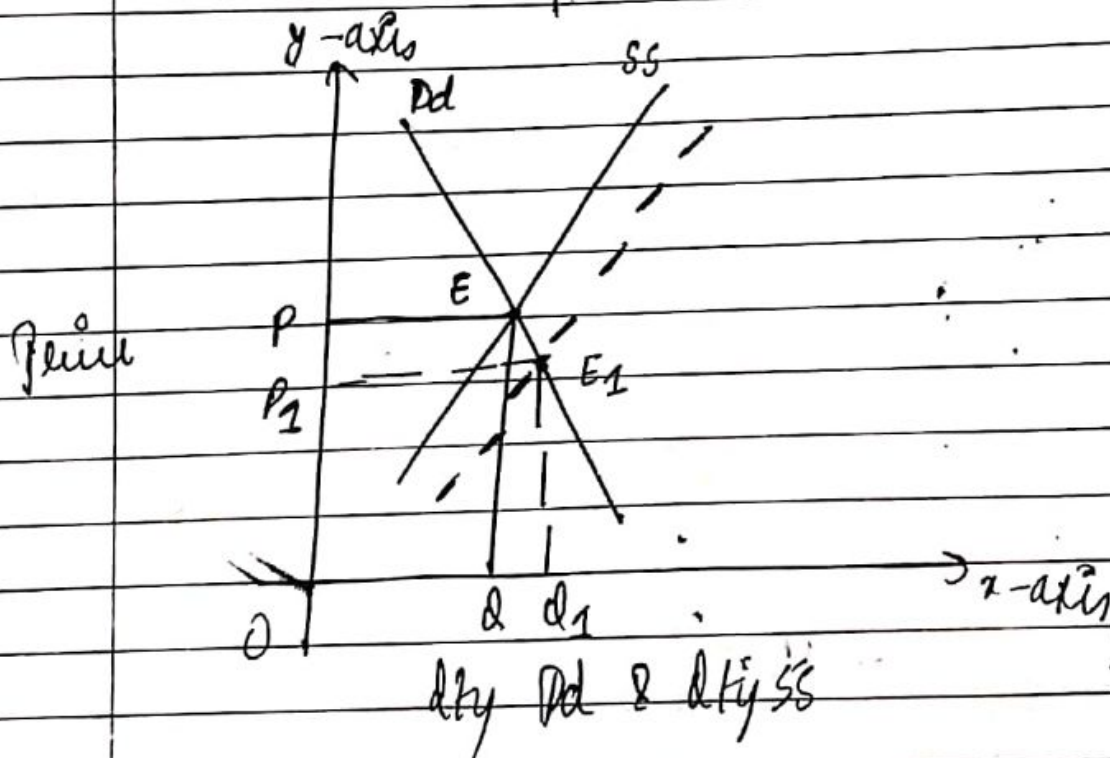


If demand decreases after reaching at equilibrium level, it has an effect of decreasing the equilibrium price and quantity. As shown in the above diagram, initially the equilibrium was point E, with decrease in P_d to P_{d1} , equilibrium has shifted to E_1 , equilibrium price to OP_1 and equilibrium qty to OQ_1 .

Q5. Explain the effect on eq. price & qty if:-

1. supply increases
2. supply decreases

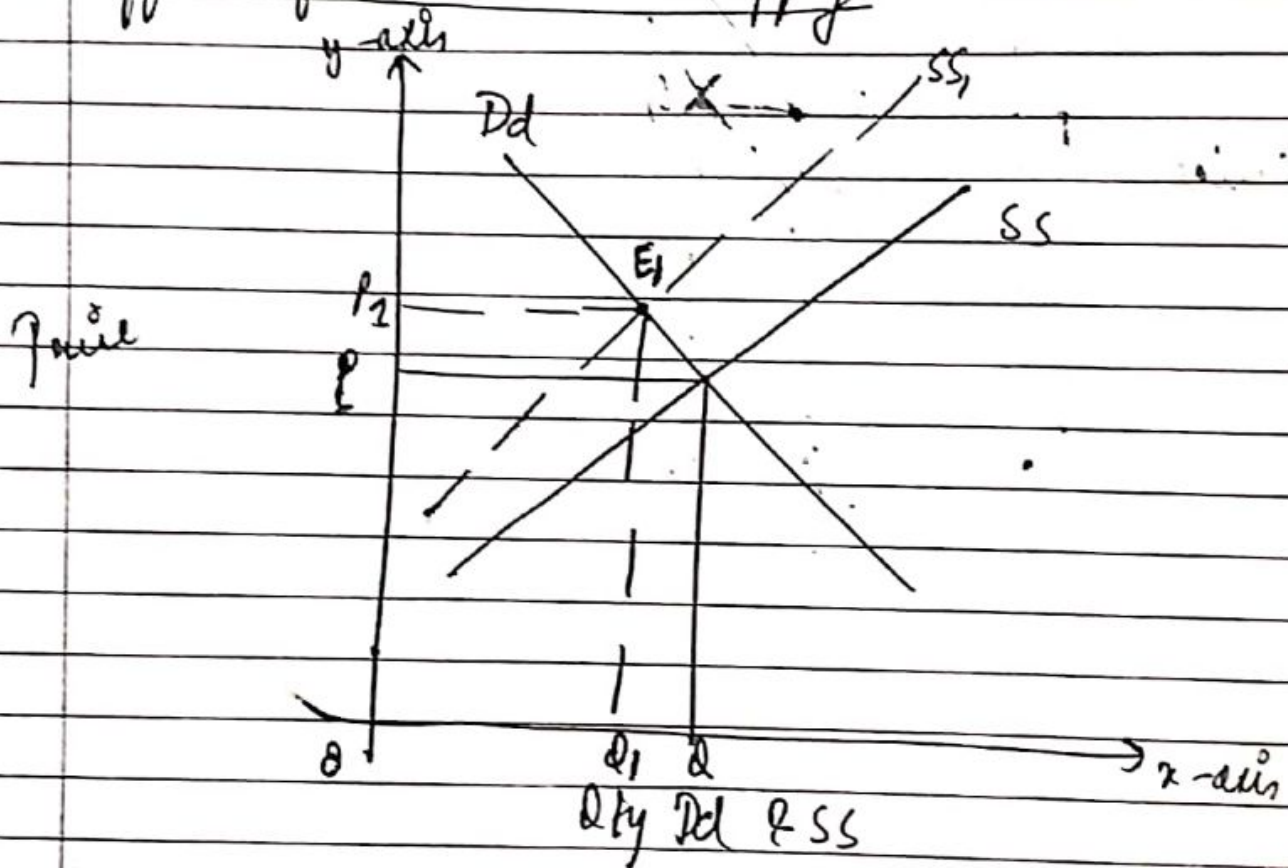
ans 5- 1. Effect of Increase in supply



In a market situation which is currently at equilibrium, if supply increases, the equilibrium price decreases and the equilibrium quantity increases. as shown in the above diagram. With initial P_d

and SS_1 , the equilibrium point was E , price and Qty was OP and OQ resp. With increase in supply, the equilibrium point shifted to E_1 with price and Qty as OP_1 and OQ_1 resp.

2. Effect of decrease in supply



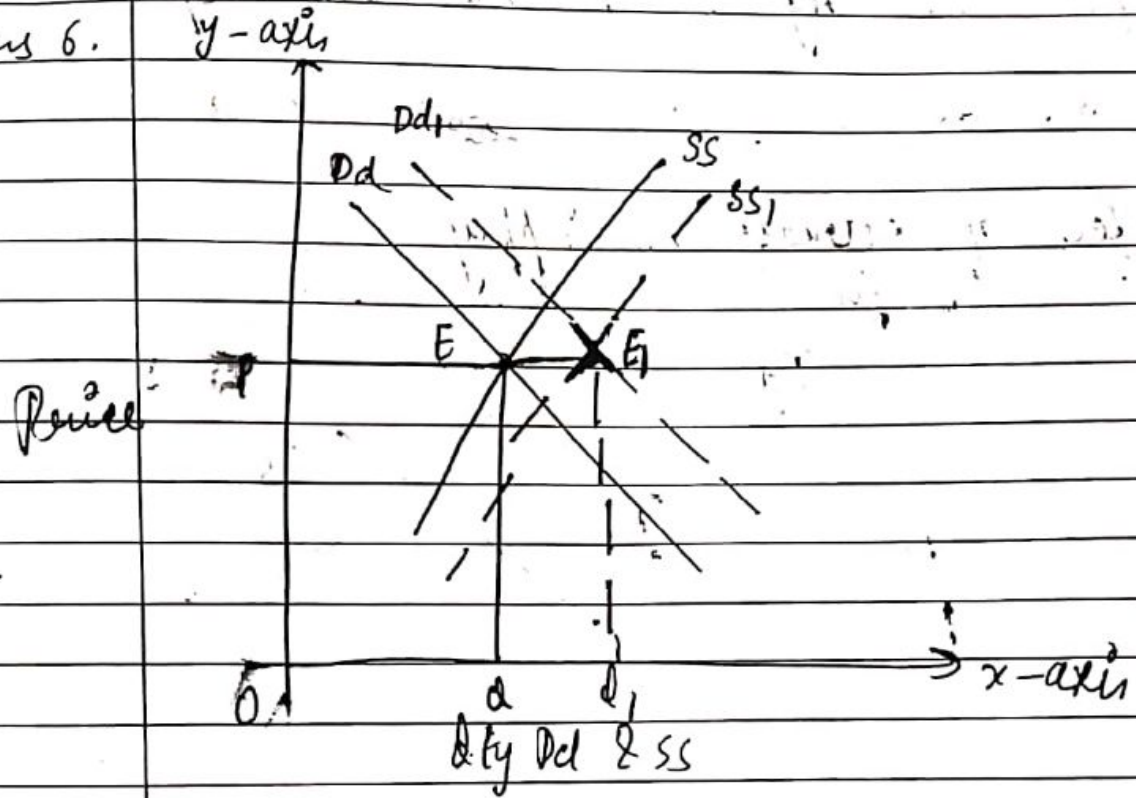
In a market situation which is currently at equilibrium, if supply decreases, the equilibrium price increases and the equilibrium Qty decreases as shown in the above diagram. With initial Dd and SS , the equilibrium point was E , price and Qty was OP and OQ resp. With decrease in supply from SS to SS_1 , the equilibrium point shifted to E_1 with price and Qty as OP_1 and OQ_1 respectively.

$\left(\begin{array}{l} \text{Dd} \uparrow \text{ Price} \uparrow \\ \text{SS} \uparrow \text{ Price} \downarrow \end{array} \right) \text{ Price} \leftrightarrow$

6. Explain the effect on eq. price & qty if:-

Q. Demand & supply both increase with the same qty.

ans 6.



Excess Dd

- competition among buyers.
- buyer ready to pay high price which will lead to rise in price.
- Rise in price = fall in Dd. because of law of Dd. and market SS will rise.
- continue until its controlled

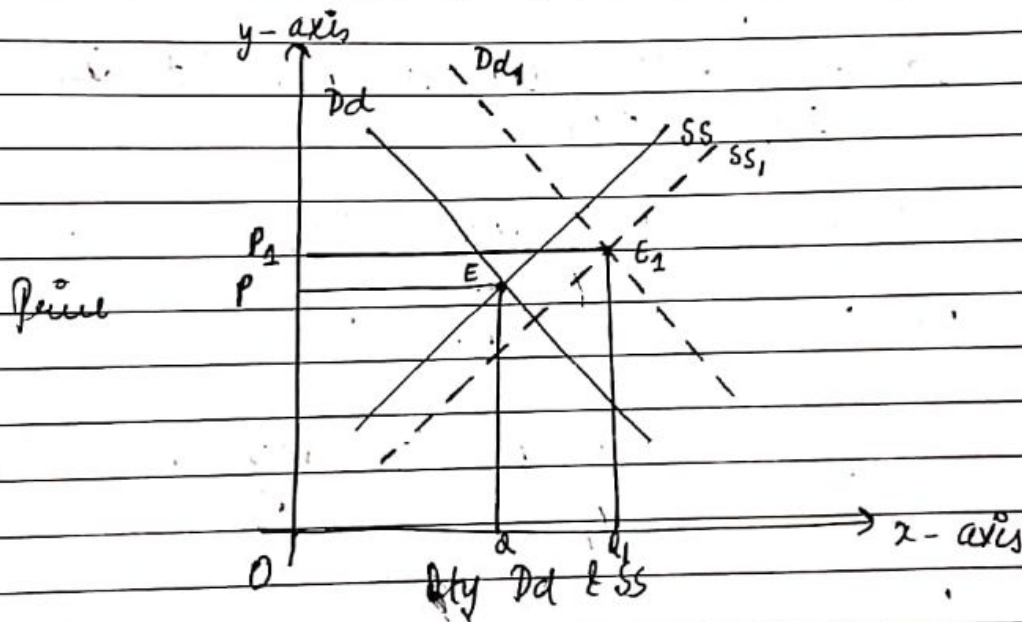
Excess SS

- comp. among sellers
- seller ready to charge low price leading to fall in price.
- fall in price = rise in Dd.
- continue until excess SS is wiped out.

17. Determine the effect of following
 1. Demand & supply both increase but ~~supply~~ demand increases with a greater qty.
 2. Demand & supply both increase but demand ~~decreases~~ increases with a ~~greater~~ ^{lesser} qty.
 3. Dd & Ss both decrease but Dd ~~decrease~~ with a greater qty.
 4. Dd & Ss both decrease but Dd ~~decrease~~ with a lesser qty.
 5. Dd $\uparrow$ es and Ss $\downarrow$ es with the same qty.
 6. Dd $\downarrow$ es and Ss $\uparrow$ es with the same qty.
 7. Dd $\uparrow$ es with a greater qty than the $\downarrow$ se in supply.
 8. Dd $\uparrow$ es with a lesser qty than the $\downarrow$ se in supply.
 9. Ss $\uparrow$ es with a greater qty than the $\downarrow$ se in Dd.
 10. Ss $\uparrow$ es with a lesser qty than the $\downarrow$ se in Dd.
 11. $\uparrow$ se and $\downarrow$ se of Ss with perfectly elastic Dd.

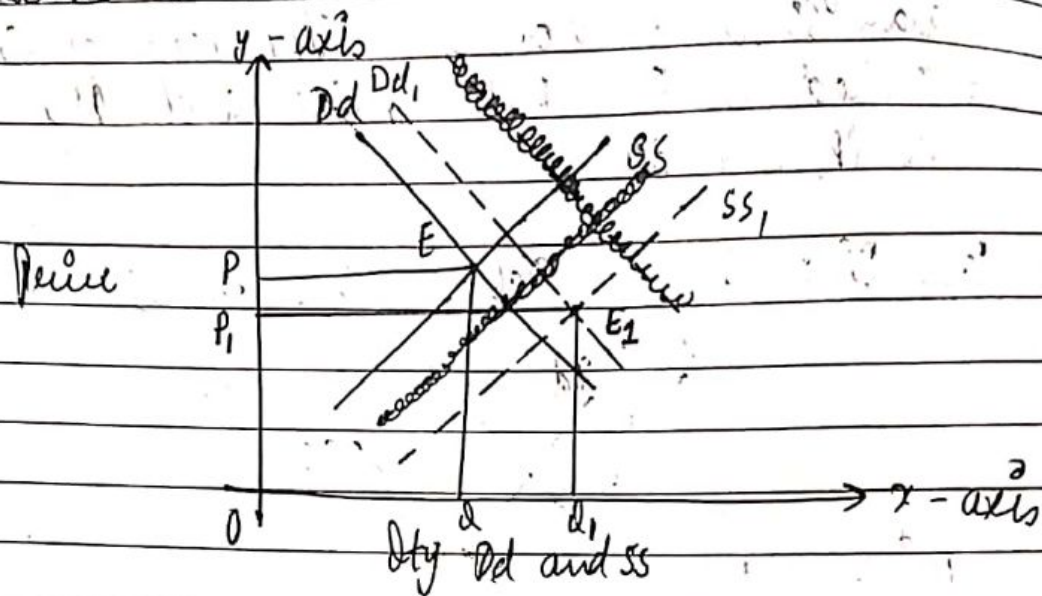
12. Tse and use in SS with perfectly inelastic Dd .
13. Tse and use in Dd with perfectly elastic SS.
14. Tse and use in Dd with perfectly inelastic SS.

ans. 7. ★ Case I : Tse in $Dd >$ Tse in SS



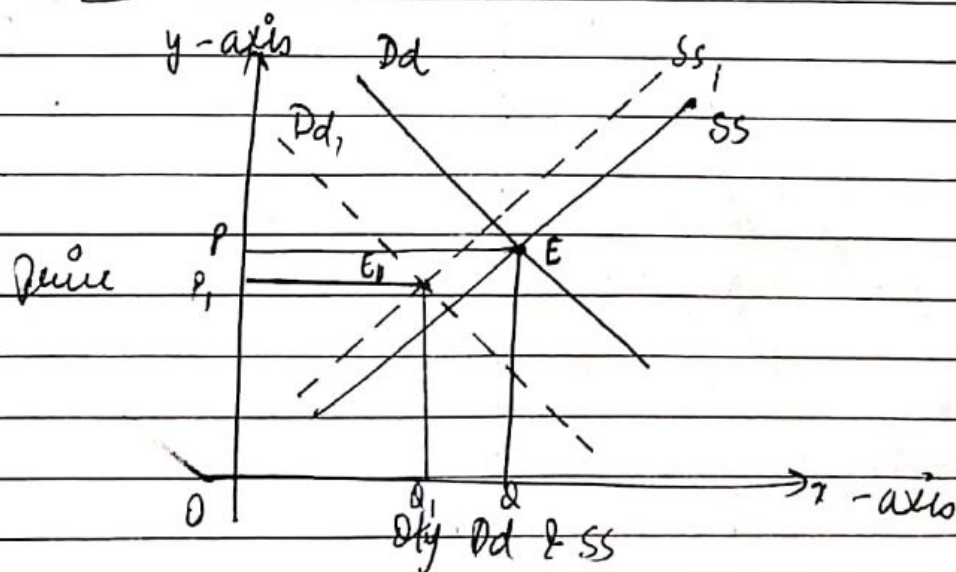
When the proportionate increase in demand is greater than the proportionate increase in supply, the shift in Dd curve to Dd_1 is more than SS curve to SS_1 . The new equilibrium is E_1 Both price and the quantity increases to OP_1 and OQ_1 .

* Case II: $\uparrow$ se in $D_d < \uparrow$ se in S_s



when the proportionate increase in supply is more than the proportionate increase, the rightward shift in the S_s curve ~~for~~ to S_{s_1} is more than D_d curve to D_{d_1} . The new equilibrium is ' E_1 '. Price decreases from OP to OP_1 and quantity increases from OQ to OQ_1 .

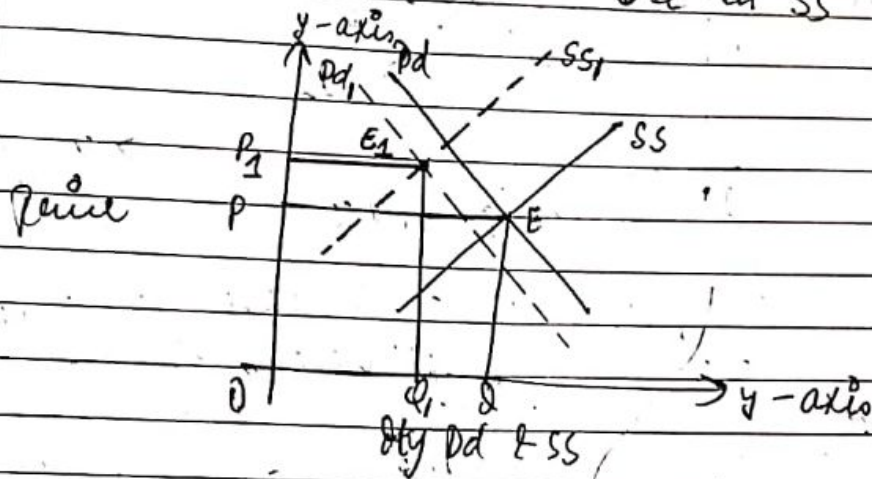
* Case III: $\downarrow$ se in $D_d > \downarrow$ se in S_s .



when the proportionate decrease in D_d is greater than the proportionate decrease in S_s ,

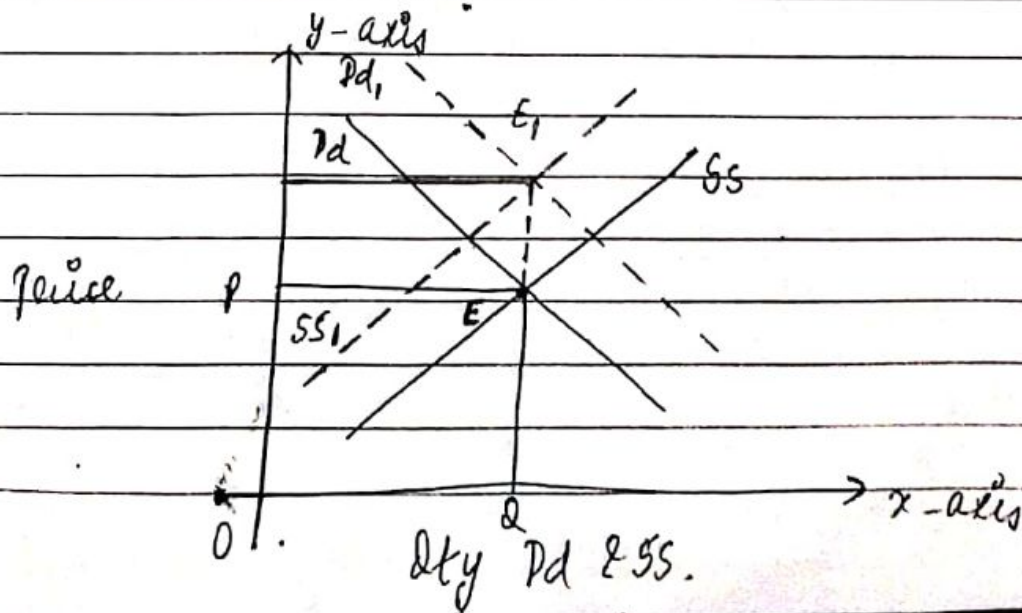
the leftward shift in Dd curve to Dd_1 is more than SS curve to SS_1 . The new equilib is E_1 . Both price and Qty decreases to DP and DD_1 .

* Case IV: Use in $Dd <$ Use in SS



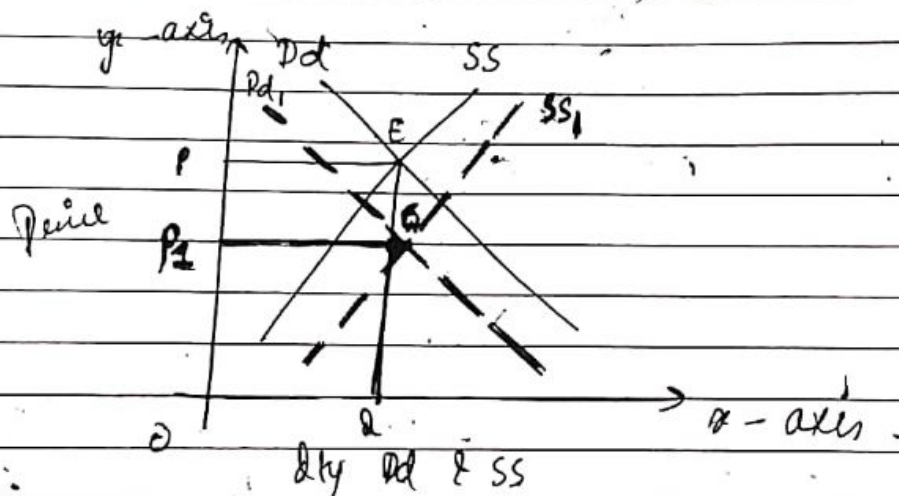
When proportionate Use in SS is more than the proportionate Use in Dd , the leftward shift in the SS curve to SS_1 is more than the Dd curve to Dd_1 . The new equilib established is point E_1 . The price increases from DP to DP_1 and Qty decreases from DD to DD_1 .

* Case V :- Use in $Dd =$ Use in SS



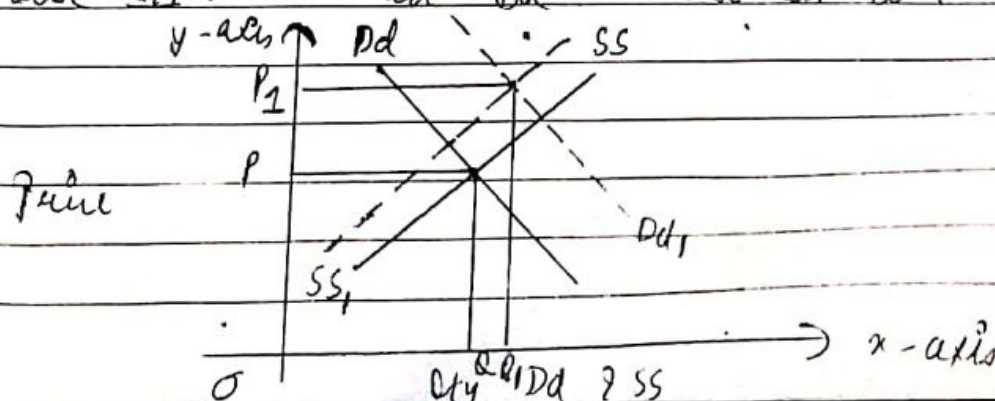
when proportionate increase in Dd is equal to proportionate decrease in supply, the rightward shift in Dd curve to Dd_1 is same as the leftward shift in SS curve to SS_1 . The new equilib obtained is point E_1 . The equilib qty remains the same but the equilib price increase from OP to OP_1 .

★ Case VI: $\downarrow$ in Dd = $\uparrow$ in SS.



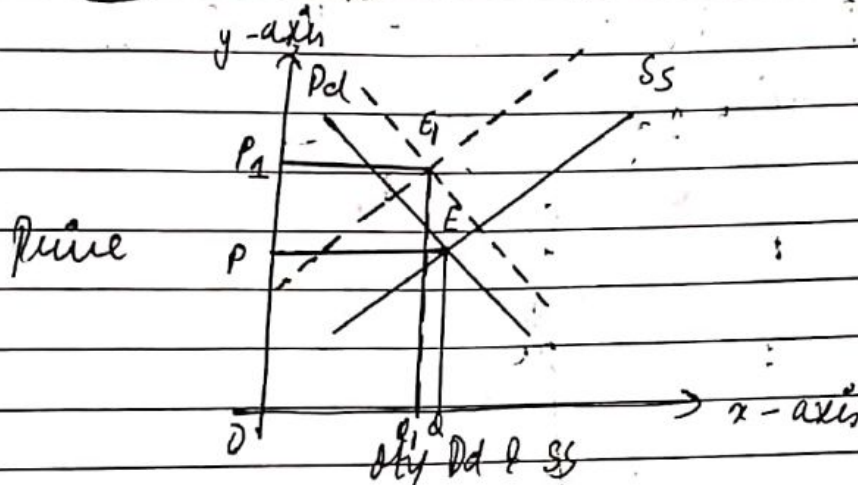
when proportionate decrease in Dd is equal to proportionate increase in SS, the leftward shift in Dd curve to Dd_1 is as same as the rightward shift in the SS curve to SS_1 . The new equilib is E_1 . The equilib qty remains the same and equilib price decreases from OP to OP_1 .

★ Case VII: $\uparrow$ in Dd $>$ $\downarrow$ in SS.



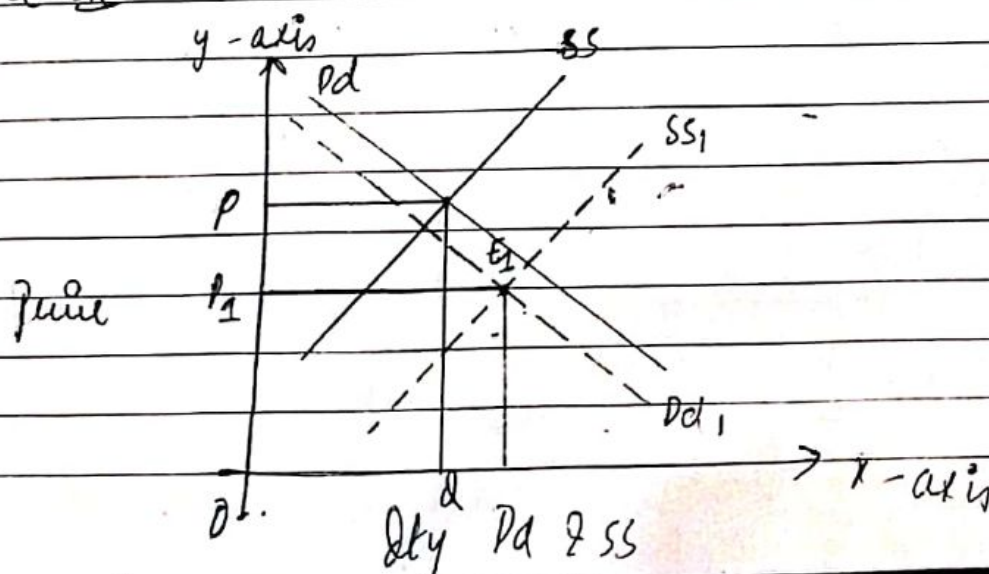
when proportionate increase in demand is greater than the proportionate decrease in supply, the rightward shift in D curve to D_1 is more than that of leftward shift in SS curve to SS_1 . Both price & Qty increase from OP and OQ to OP_1 and OQ_1 resp.

★ Case VIII :- $\Delta D < \Delta SS$



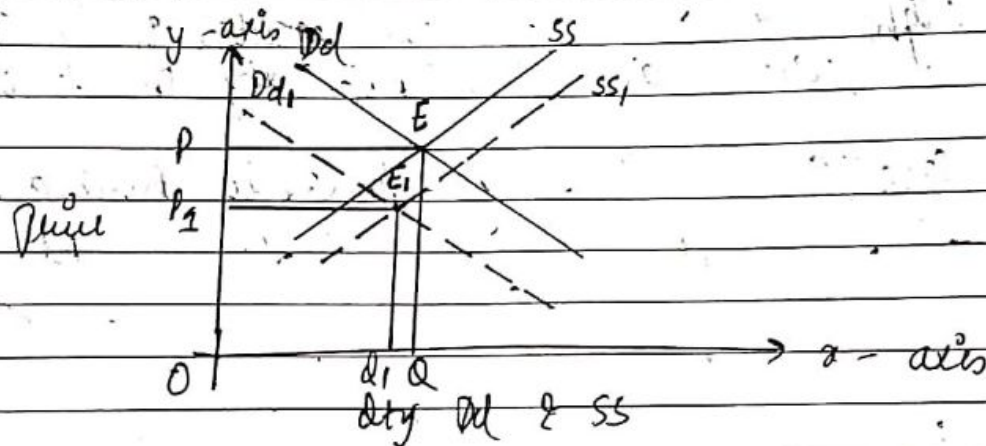
when proportionate increase in demand is less than the proportionate decrease in supply, the leftward shift in SS curve to SS_1 is more than the rightward shift in D curve to D_1 . The new equilibrium is E_1 . The price rises from OP to OP_1 and Qty decreases from OQ to OQ_1 .

★ Case IX :- $\Delta D < \Delta SS$



when proportionate decrease in demand is less than the proportionate increase in supply, the rightward shift in SS curve to SS_1 is more than the leftward shift in Dd curve to Dd_1 . The new equilib is E_1 . The Qty increases from OQ to OQ_1 and price decreases to OP_1 .

★ Case X :- Rise in Dd > Rise in SS



when proportionate increase in supply is less than the proportionate decrease in Dd, the leftward shift in Dd curve to Dd_1 is more than the rightward shift in SS curve to SS_1 . The new equilib is obtained in E_1 . Both Price and Qty decreases from OP to OP_1 and OQ to OQ_1 .

★ Case XI :- Perfectly Elastic Dd curve.

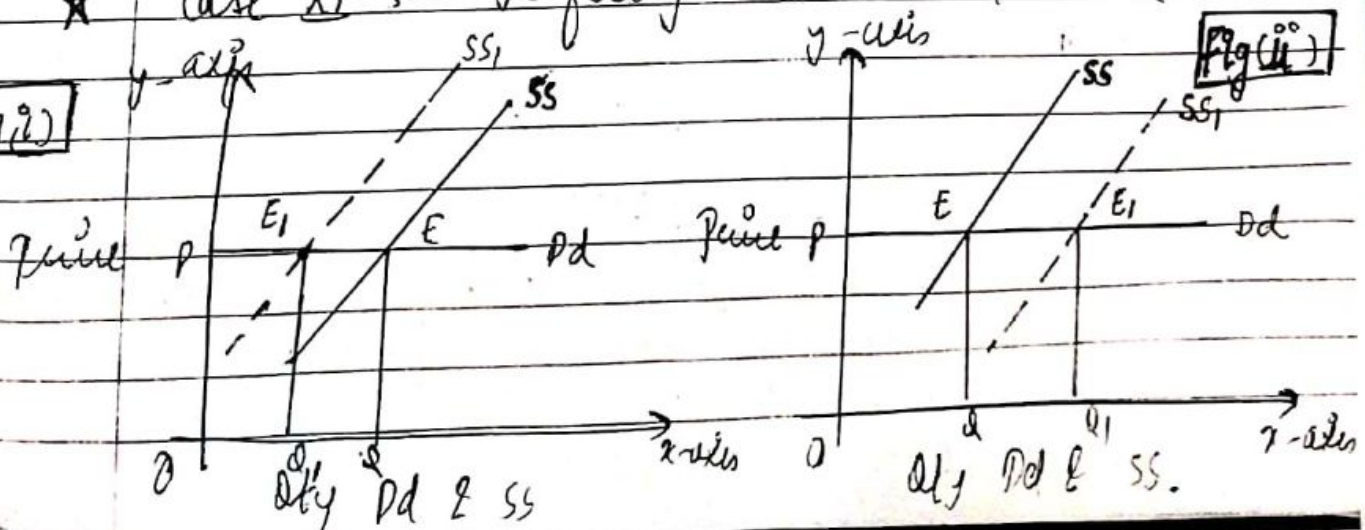


Fig (9) → when the supply decrease in a perfectly elastic demand, the SS curve shifts towards left to SS_1 . The new equilibrium established is E_1 . The price remains the same and Qty decreases from OQ to OQ_1 .

Fig (10) → when the supply ~~decreases~~ increases in a perfectly elastic demand, the SS curve shifts rightwards to SS_1 . The new equilib. is E_1 . The price remains same, but Qty rises to OQ_1 .

* Case XII :- Perfectly Inelastic Demand.

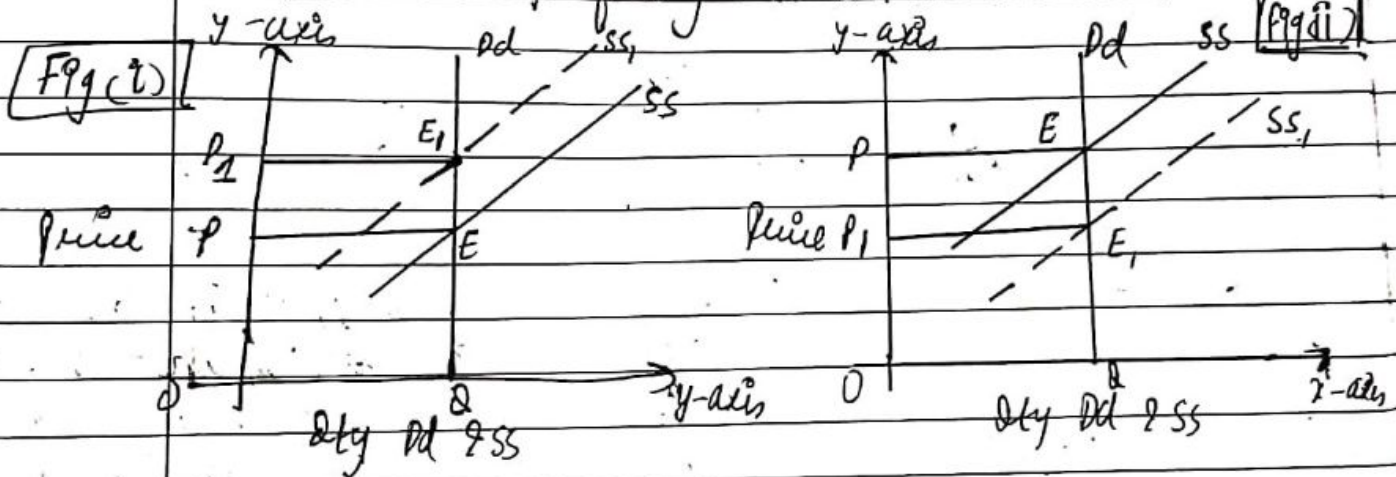
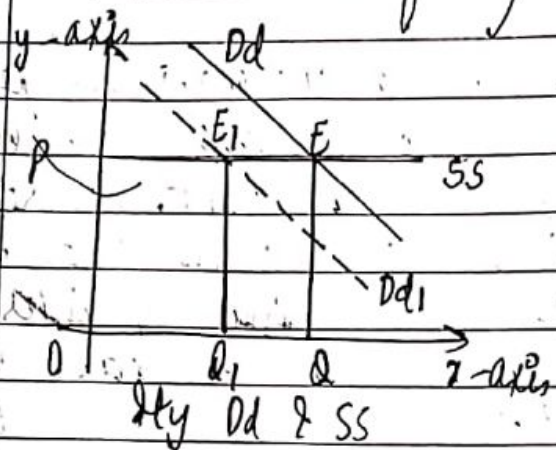


Fig (i) → when the supply decreases in a perfectly inelastic demand, there is a leftward shift in SS curve to SS_1 . The new equilib is E_1 . Qty remains the same but price rises from OP to OP_1 .

Fig (ii) → when the supply increases in a perfectly inelastic demand, there is a rightward shift in SS curve to SS_1 . Qty remains the same. The equilib price decreases to OP_1 and the new equilib point is E_1 .

Case XIII: Perfectly Elastic supply

[Fig (i)]



[Fig (ii)]

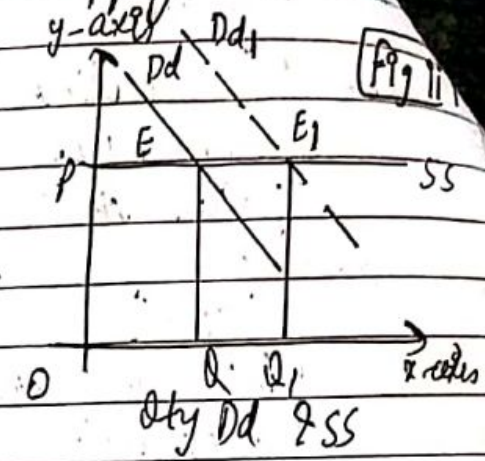
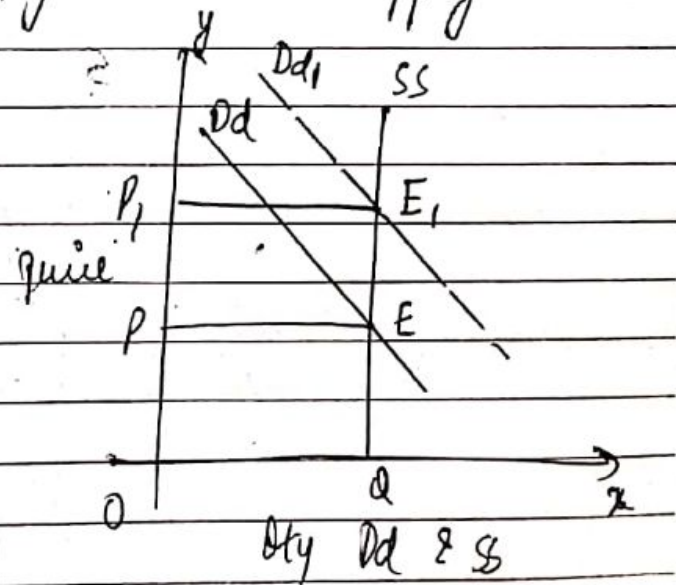
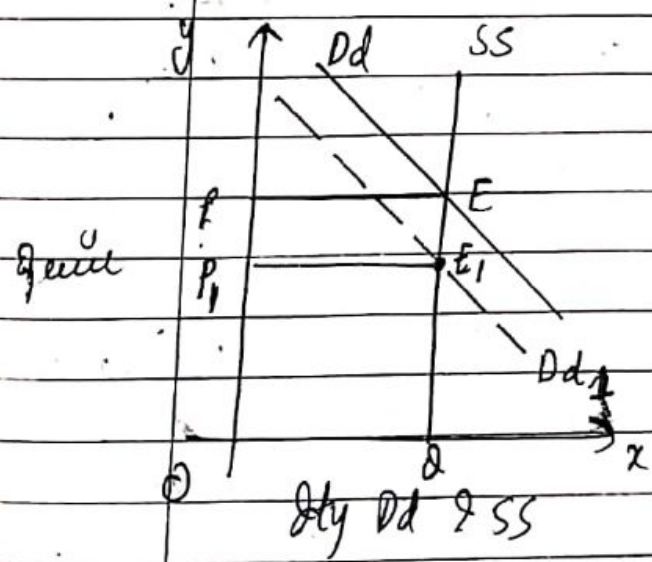


Fig (i) $\rightarrow$ Qty $\uparrow$ to Q_1 .
Price remains the same.

Fig (ii) $\rightarrow$ Qty $\downarrow$ to Q_1 .
Price remains the same.

Case XIV: Perfectly Inelastic supply



$\rightarrow$ Qty remains same
 $\rightarrow$ Price $\downarrow$ to P_1 .

$\rightarrow$ Qty remains same
 $\rightarrow$ Price $\uparrow$ to P_1 .

the equilib. price 'OP'.
If this controlled price, the qty demanded is greater than qty ss by Sd. which creates a kind of shortage and some customers go unsatisfied. To meet this excess demand, govt may enforce a rationing system, where rationing is a technique in which a minimum quota of essential commodities is supplied at a cheap price. But this rationing system has certain drawbacks explained as follows :-

1. Black marketing.

A market in which the commodities are sold at a price higher than the price fixed by the govt. This kind of markets exist because certain customers are willing to buy larger qty of a commodity than what govt. is supplying.

2. Difficulty in obtaining the commodity.

It is not easy for customers to obtain the commodity from ration shops since demand is high and supply is less.

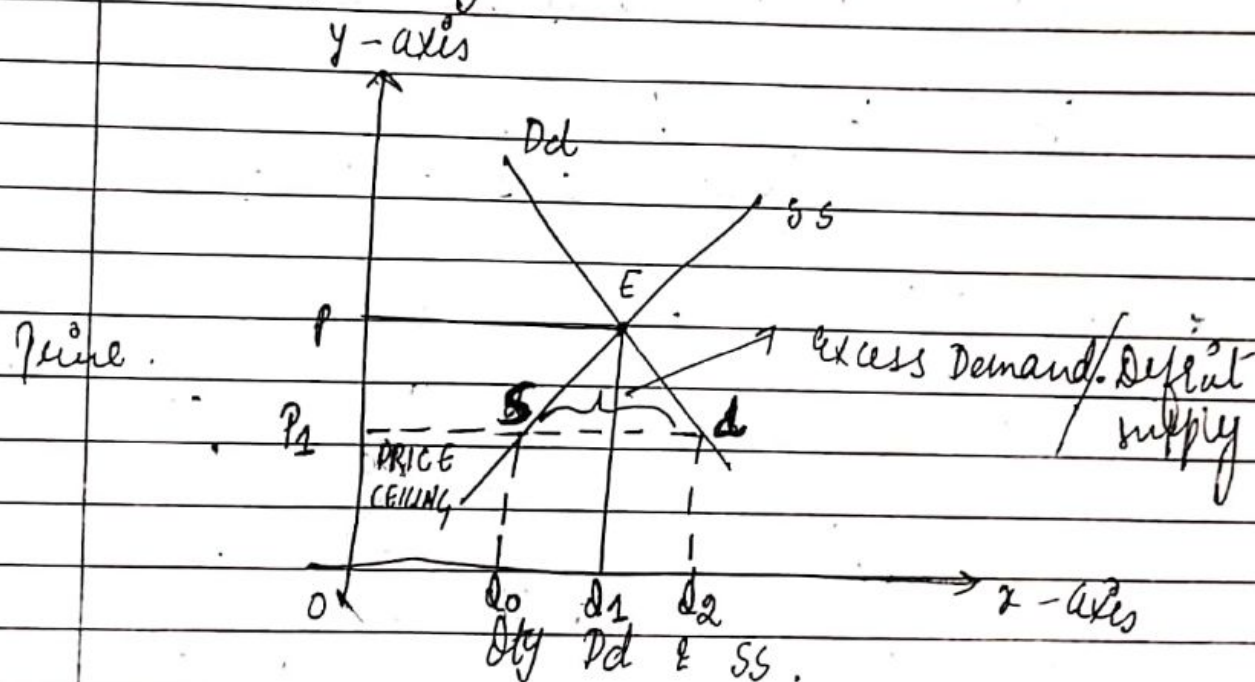
Q9. explain the concept of Price Floor / MSP with the help of a diagram.

ans 9. Price Floor refers to the minimum price fixed by govt. over and above the equilib price. This is the price which producers should get for their product. This happens when govt feels that the price determined by Dd and supply forces is not enough for producers.

Q8. Discuss the concept of price ceiling with the help of diagram.

ans. Price ceiling refers to fixing the maximum price of a commodity at a level lower than the equilibrium price. It is generally done by govt. where equilibrium price is determined by demand and supply forces is too high. This kind of intervention by govt takes place generally in case of essential commodities.

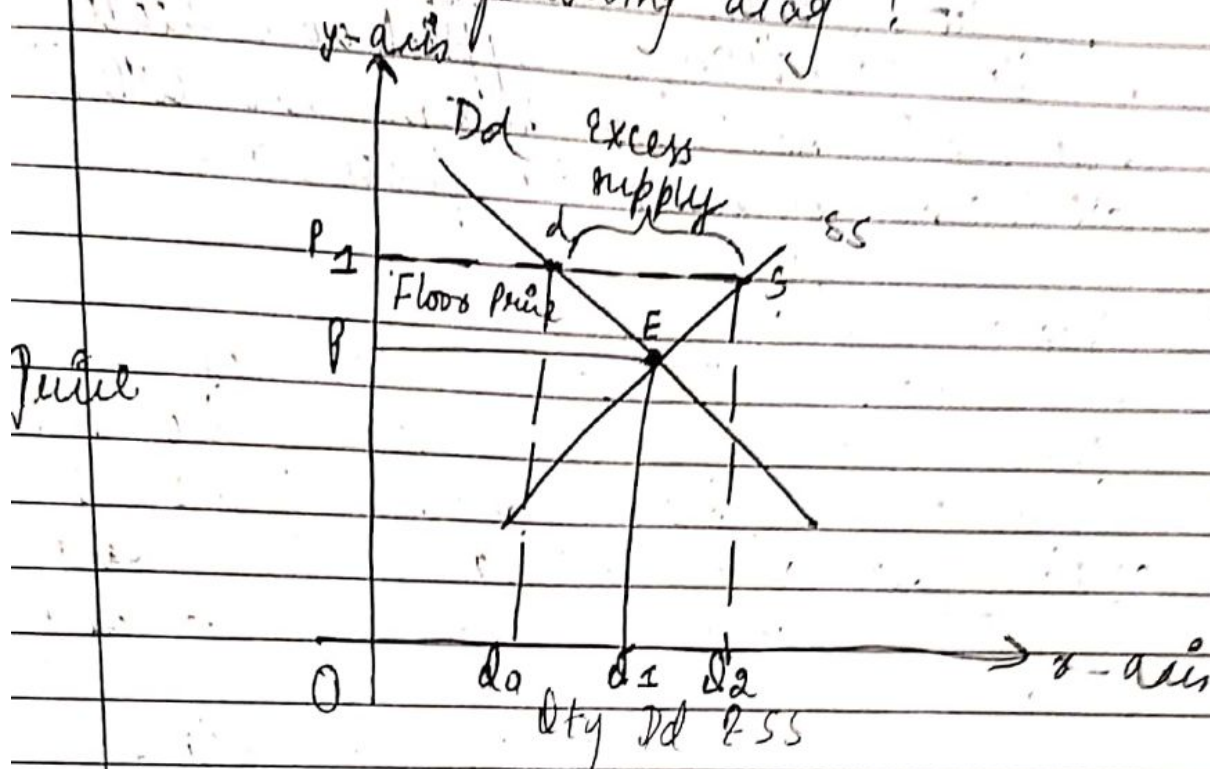
Let us illustrate this concept with the help of following diagram:-



In this diagram, Dd and Ss represent demand & supply curves resp. E is the point of equilibrium. OP is the equilibrium price and OQ is the equilibrium qty. Now, suppose, this is a case of wheat and the equilibrium price is too high for many people to afford the wheat. Since wheat is an essential commodity, govt fixed the maximum price at OP_1 , i.e. known as price ceiling and it is less than

gove. intervenes in the market and fix up a minimum support price (MSP). It generally happens in case of agricultural products, minimum wage legislation etc.

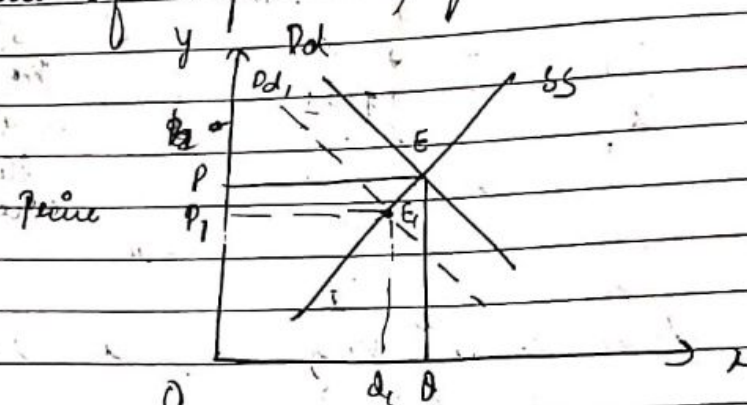
The effect of floor price can be understood with the following diag.:



In this diag, D_d and S_s represents demand & supply curve resp. and point E represents the point of equilib. OP is of price and OQ is of qty. But let us suppose the price OP is determined is lower for the producer of commodity. Govt intervenes & fix it up at OP_1 . This is the MSP to protect the interest of suppliers. But this creates a situation of excess S_s shown by Q_s . This excess S_s is bought by govt either for buffer stock or for export purposes.

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Q10. What will be the effect of eq pr & qty when price of complimentary goods rise?

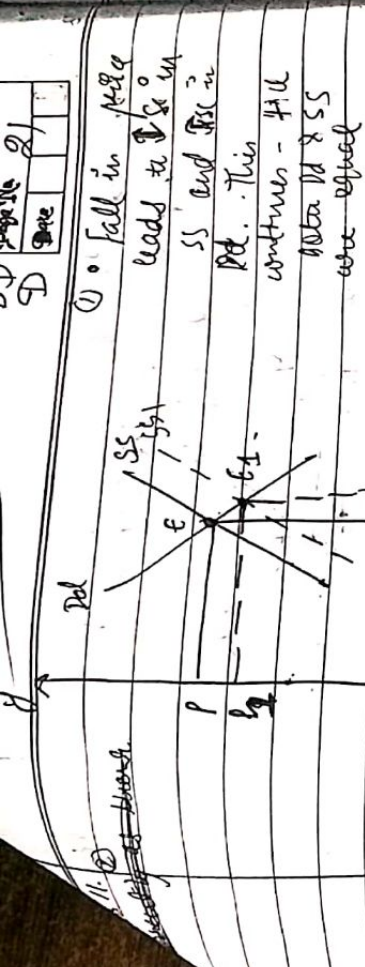


Ans 10. When price of complimentary goods rise, keeping other things as constant the demand for given good rises. Since it become expensive to consume the 2 commodities together, it will lead to excess supply that leads to competition among the sellers. which reduce the price. Fall in price leads to decrease in supply and increase in Demand. These changes continued till both supply and demand become equal at new eq. price. Eventually, there will be fall in demand only where both eq. price and qty will fall.

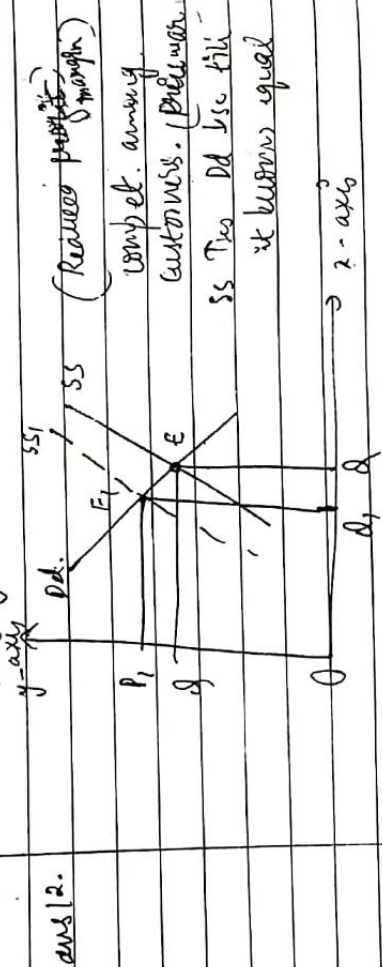
Q11. What will be the effect of eq price & qty when no. of firms increase.

Q12. explain effect of eq price when price of input increases.

Q13. How will a change in price of coffee affect the price of Tea as well as eq qty.

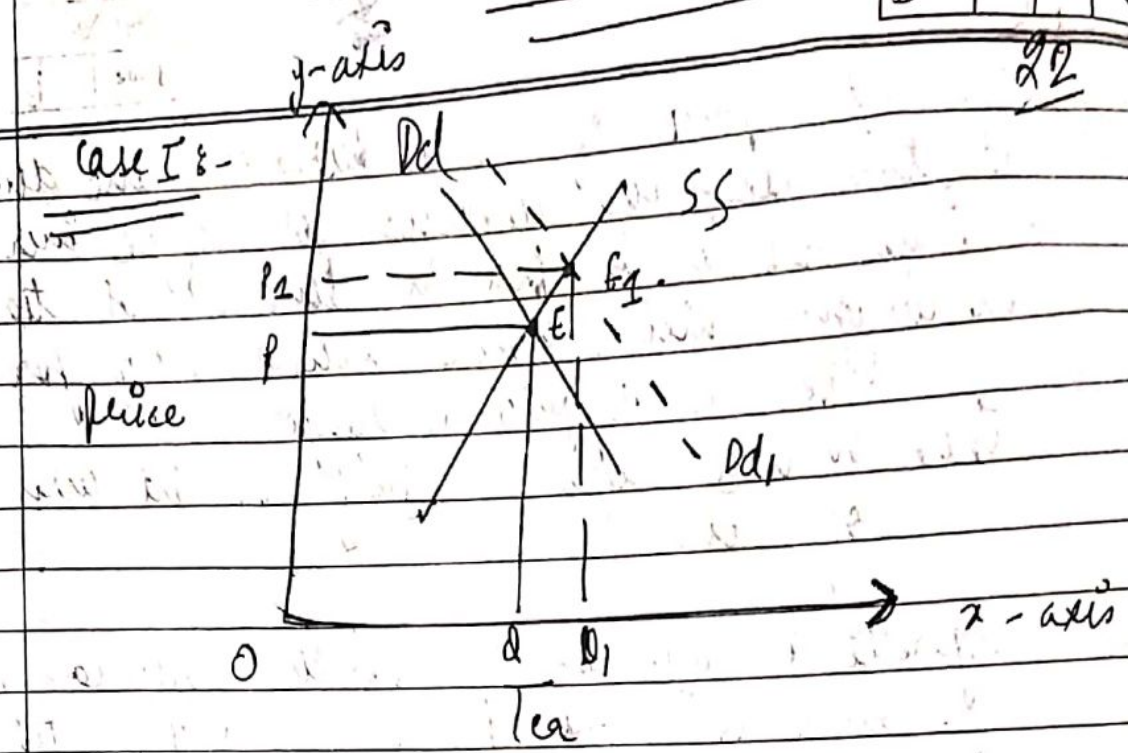


11. (The supply curve will shift towards the right. When the number of firms increase, keeping other things as constant, the supply for the given commodity increases. The increase in expenditure for the consumers to buy the goods, this leads to a competition among the sellers for the goods, the price of the commodity is established at point E. eg Price rises to P₁ and Q of Sky rises to Q₁.



12. When the price of input increases, the supply of the given good decreases. The price of the good increases to P₁ and Q of Sky rises to Q₁. As it becomes expensive for the sellers to produce goods.

Ans 3. Case I:-



Coffee and Tea are substitute goods.

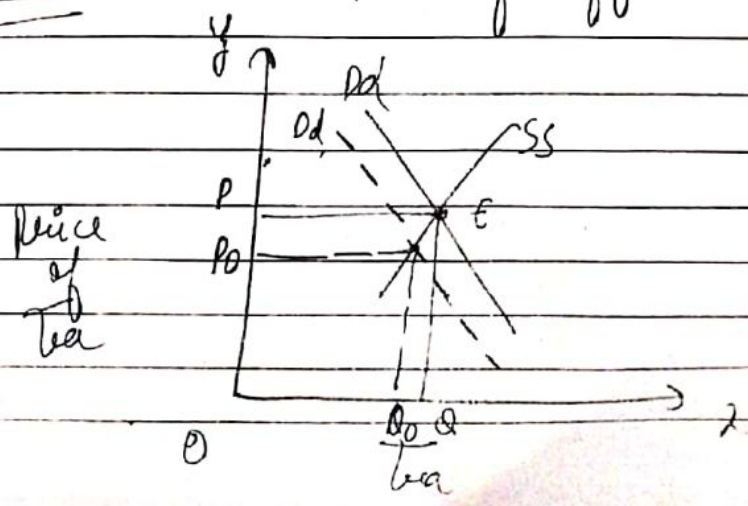
Substitute goods refers to those goods which can be used in place of one another. Rightward shift in Dd curve for Tea.

When the price of a complementary good P_{ser} , the demand for the other good P_{ser} .

In this case, as the price of coffee increases the demand for coffee falls and the demand for tea increases.

The new eq. is obtained at E_1 where P rises to OP_1 and Q to OQ_1 .

Case II:- when price of coffee rises



When the price of coffee decreases, the demand for tea also decreases. For coffee increases which results in fall in demand for tea. The customers will be more willing to go for coffee as its price is cheaper. There is a leftward shift in Dd curve of Tea.

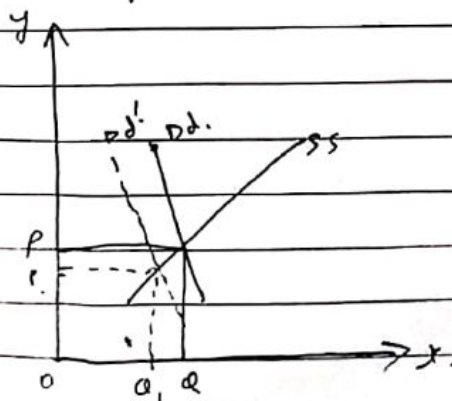
Q14. Cigarette is injurious to health. How can govt reduce its consumption through Dd & SS forces. Explain the chain of effect of govt. actions.

Q15. Explain the changes that will take place in the market if prevailing price is less than the eq price.

Q16. Market of an essential commodity

HOMEWORK

Q14. Cigarette smoking is injurious to health. To discourage the consumption of cigarettes, Government should levy heavy taxes so that the price of cigarettes goes up. Naturally, the demand for its consumption will fall.



Also the Government can curtail the supply of cigarettes by limiting the no. of cigarettes produced by different cigarette manufacturers.

