

## Principles of Microeconomics

### ASSIGNMENT - 3

Name :- Pavan Abhishek Swendra

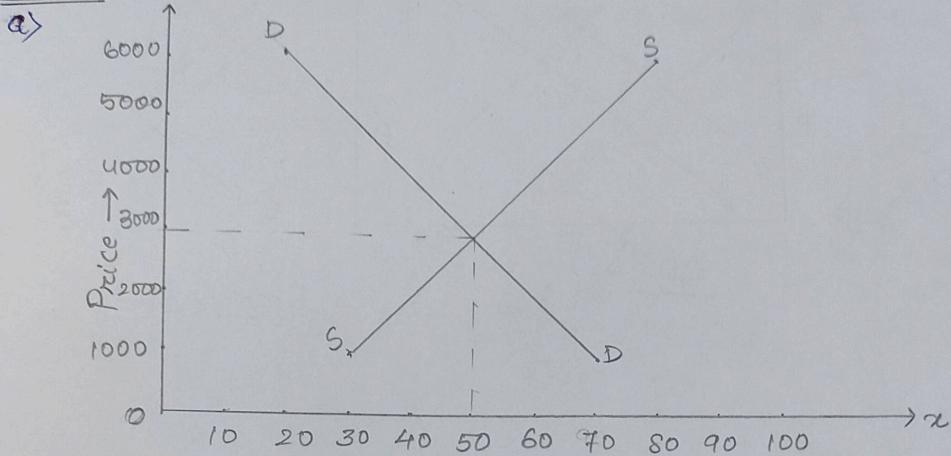
Section :- 2141013

Regd No:- 2141019397

Date: 8/6/22

Q1

Solution: y

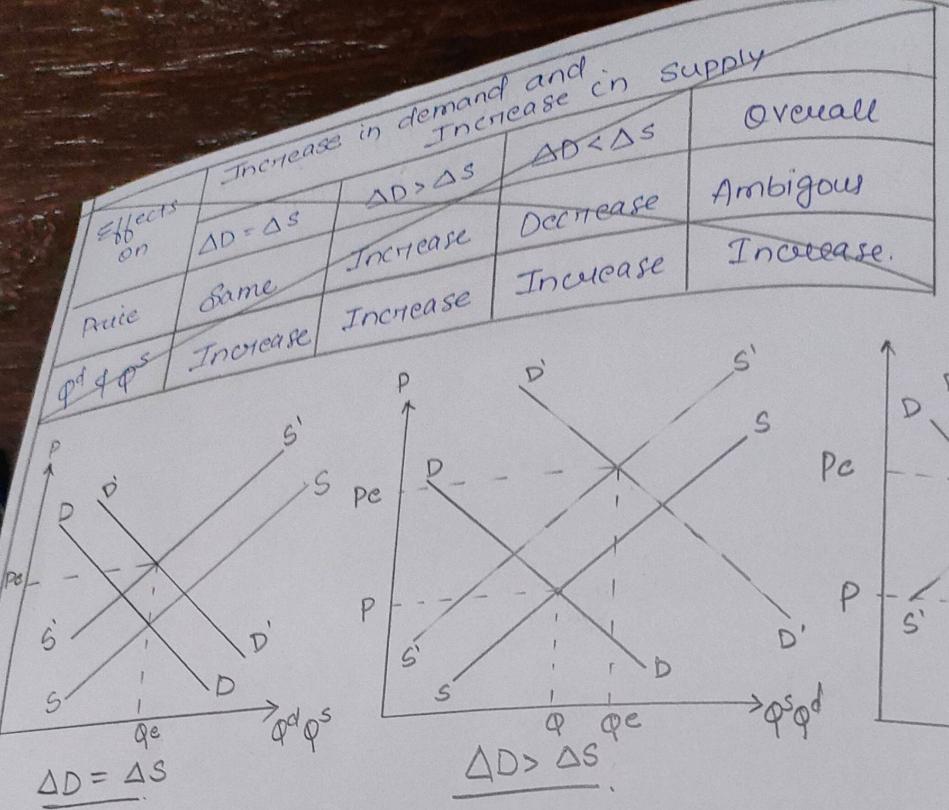


(Quantity Supplied, Quantity Demanded)/Day ('00 No)

The Equilibrium price  
is 3000 and Equilibrium  
Quantity of bicycles is 50.

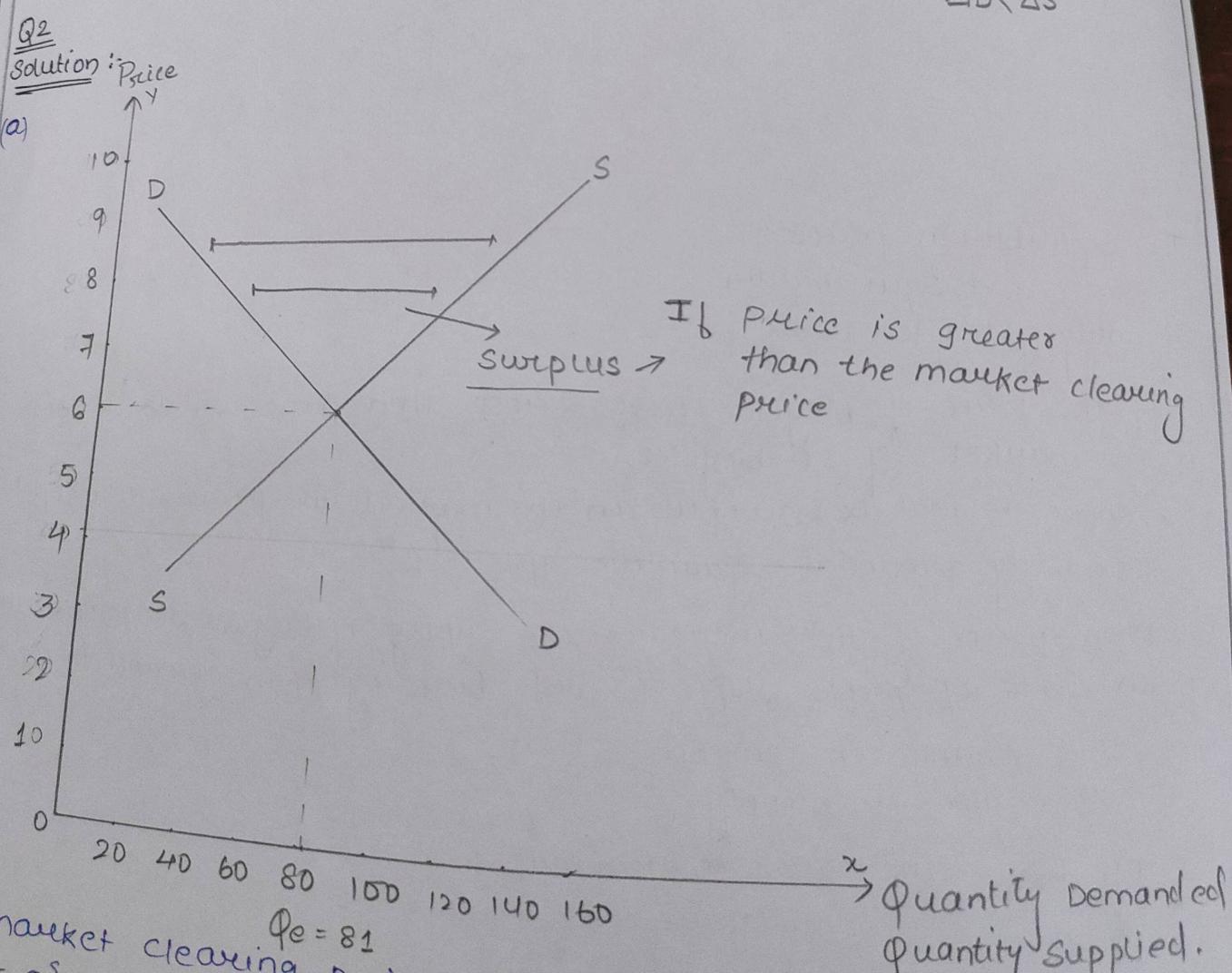
- b) If the price of bicycles were ₹4000. then there will be surplus in the market of 20 bicycles.  
 $\therefore$  There will be surplus in the market the price will drop till  
 quantity demanded = quantity supplied = 50.
- c) When price of steel increases, the supply of bicycles decreases and when taste of people shifts towards bicycling than demand increases.  
 Let  $\Delta D$  = Change in demand.  
 $\Delta S$  = change in supply.

Effects on	Increase in demand & decrease in Supply			Overall
	$\Delta D = \Delta S$	$\Delta D > \Delta S$	$\Delta D < \Delta S$	
Price	Increases	Increases	Increases	Increases
$\varphi^d$ and $\varphi^s$	Same	Increases	Decreases	Ambiguous



Actual price in the market would be surplus price, where  $P_d = P_s$ . Considering supply and demand, therefore, supply is:

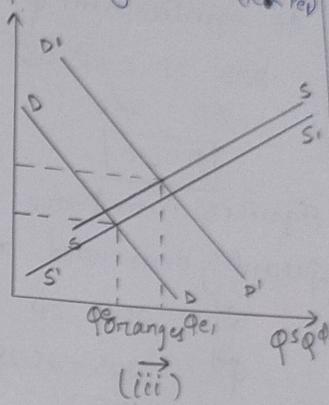
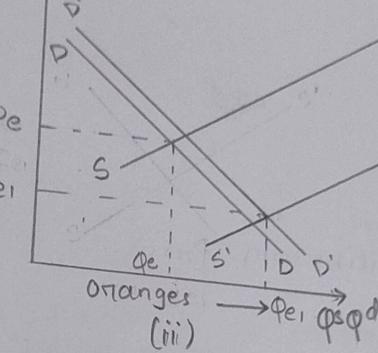
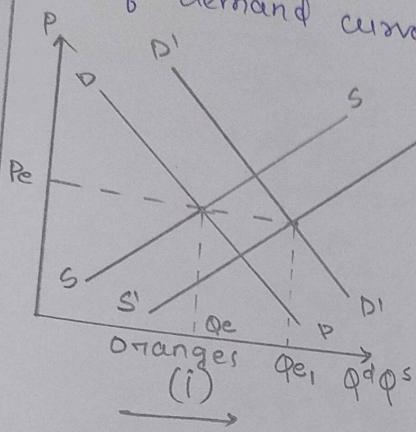
- If demand increases
- If demand decreases
- If demand remains constant



If actual price in this market were above clearing price, then we would we surplus in the market in the, therefore the price will drop till it attains the equilibrium. where  $Q^d = Q^s$ .

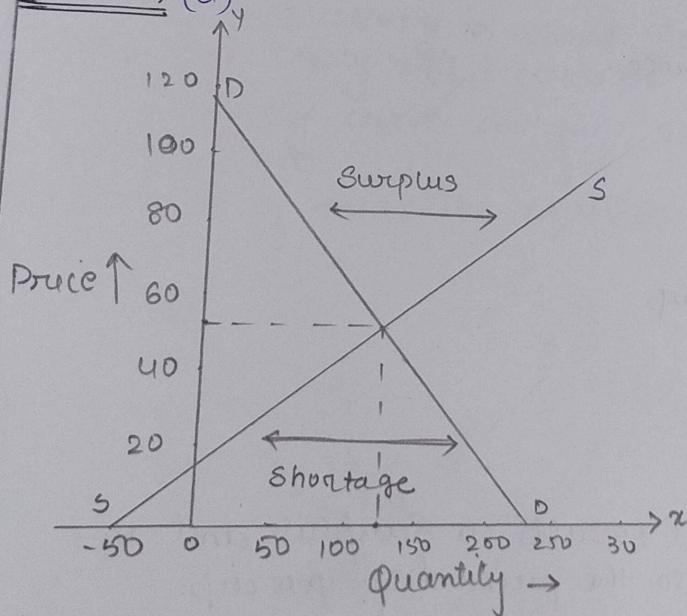
(c) Considering the Event, The demand and Supply both will increase towards right. But there will be three cases as follows:

- If demand curve shifts equally to that of supply curve ( $P_e = P_{e1}$ )
- If demand curve shifts less as compared to supply curve ( $P_e > P_{e1}$ )
- If demand curve shifts more as compared to supply curve ( $P_e < P_{e1}$ )



Q3

Solution (a)



$$y = mx + c$$

$m$  = Slope

$$m = \frac{-2}{1} = -2 \quad \text{for quantity demanded.}$$

At price = 0, Icecream demand is 205 cups

$$205 = -2 \times 0 + c$$

$$\boxed{c = 205}$$

$$\therefore \boxed{Q^d = 205 - 2P} \quad (i)$$

Q54

$$\text{Solution: } Q^d = Q^s$$

For quantity supply,

$$m = \frac{3}{1} = 3$$

At Price = ₹15.

Supply = 0.

$$\therefore 0 = 3x15 + c$$

$$\boxed{c = -45}$$

$$\boxed{Q^s = 3P - 45} \quad \text{--- (ii)}$$

At equilibrium  $Q^d = Q^s$ ,

$$205 - 2P = 3P - 45$$

$$\therefore P = 50$$

$$\boxed{P = 50}$$

Equilibrium Price = ₹50/-.

Quantity demanded at Equilibrium Price.

$$Q^d = 205 - 2P$$

$$Q^d = 205 - 2(50)$$

$$Q^d = 105$$

Quantity supplied at Equilibrium Price.

$$Q^s = 3P - 45$$

$$= 3(50) - 45$$

$$Q^s = 105$$

(c) (i)

when price in the market is ₹75/- per cup

$$Q^d = 205 - 2(75)$$

$$Q^d = 55$$

$$Q^s = 3(75) - 45$$

$$Q^s = 180$$

$$\therefore \boxed{Q^d < Q^s}$$

This results in Surplus. and ~~also~~ the price drops per cup.

(ii) when price in the market is ₹30/- per cup.

$$Q^d = 205 - 2(30)$$

$$Q^d = 145$$

$$Q^s = 3(30) - 45$$

$$Q^s = 45$$

$$\therefore \boxed{Q^d > Q^s}$$

This results in shortage and also the price increase per cup.

64

Solution:  $\Phi^D = 1200 - 30P$   
 $\Phi^S = -300 + 20P$  (Given)

(a) At market clearing,  
 $\Phi^D = \Phi^S$

$$1200 - 30P = -300 + 20P$$

$$50P = 1500$$

$$\boxed{P = 30}$$

Market clearing Price is Rs 30,,

(b) If Actual price is Rs 20.

$$\therefore \Phi^D = 1200 - 30(20)$$

$$\Phi^D = 600$$

$$\Phi^S = -300 + 20(20)$$

$$\Phi^S = 100$$

$\boxed{\Phi^D > \Phi^S}$  There will be shortage in market.  
 which will result in Increase in Price.

Considering the event,

(i) As the productivity of wheat increases, the demand will remain same and supply will increase.

(ii) The supply curve will shift right whereas demand curve will remain same.

(iii) Because of this, The equilibrium price drops and quantity rises.

