

Marginal Benefit & Marginal Cost

- Marginal Benefit = Benefit derived by the customer from consuming the additional or incremental unit
- Marginal Benefit = Marginal Utility
- Marginal Benefit Curve = Demand Curve
- Marginal Cost = cost of producing the additional or incremental unit
- Marginal Cost Curve is similar to Supply Curve

Consumer Surplus

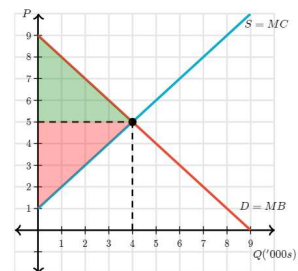
- Consumer surplus is the difference between willingness to pay for a good and the price that consumers actually pay for it.
- Individual Consumer Surplus = Max Price consumer is willing to pay – Market Price
- Individual Consumer Surplus = Marginal Benefit – Market Price
- The difference between a consumer's marginal benefit for a unit of consumption, and what they actually pay, represents how much benefit a consumer gets from the price they are paying.
- Total Consumer Surplus = Area of Triangle below demand curve up to the price level

Producer Surplus

- Producer surplus is the difference between minimum expectation of price for a good and the price that producers actually receive for it.
- Individual Producer Surplus = Market Price – Min. Expected Price
- Individual Producer Surplus = Market Price – Marginal Cost
- The difference between a Producer's marginal cost for producing a unit, and what they actually receive, represents how much benefit a producer receives.
- Total Producer Surplus = Area of Triangle above supply curve up to the price level

Total Surplus

Total Surplus = Consumer Surplus + Producer Surplus



Q.1

Price	QD	QS
4	0	40
3	10	30
2	20	20
1	30	10
0	40	0

- Find
 - Consumer Surplus
 - Producer Surplus
 - Total Surplus
 - DWL if any

Allocative Efficiency and Deadweight Loss

- A market producing at equilibrium is achieving **allocative efficiency**, meaning that resource are allocated in the best possible manner to maximize total welfare among consumers and producers.
- Allocative efficiency is achieved when the price in the market creates a situation of $QD=QS$ (also called as $MB = MC$)
- At any other price and quantity combination, the market would be *allocatively inefficient*. In this case, $QD \neq QS$ (also called as $MB \neq MC$) and the situation creates a loss called as 'Deadweight Loss'

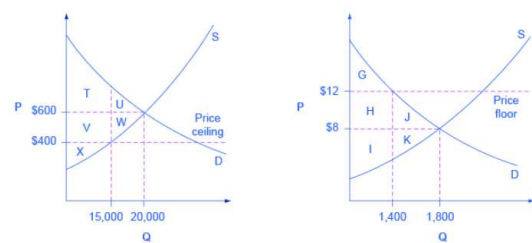
Q.2

Price	QD	QS
4	0	40
3	10	30
2	20	20
1	30	10
0	40	0

- If the government decides to have a price floor at Rs.3
- If the government imposes a price ceiling at Rs.1

- Find
 - Consumer Surplus
 - Producer Surplus
 - Total Surplus
 - DWL if any

Price Ceiling & Price Floor



CS: T+V
 PS: X
 TS: T+V+X
 DWL: U + W

CS: G
 PS: H + I
 TS: G+H+I
 DWL: J + K

Q.3

Price	QD	QS
4	0	40
3	10	30
2	20	20
1	30	10
0	40	0

If the government decides to charge Re.1 tax on goods sold

- Find
 - Consumer Surplus
 - Producer Surplus
 - Govt. Surplus
 - Total Surplus
 - DWL if any

Effect of Price Ceiling, Price Floor & Taxation

Case	CS	PS	GS	TS	DWL
Equilibrium	Equal*	Equal*	No	Efficient (Max)	No
Price Ceiling	High	Low	No	Inefficient	Yes
Price Floor	Low	High	No	Inefficient	Yes
Tax on Goods	Equal* (lower than equilibrium level)	Equal* (lower than equilibrium level)	Yes	Inefficient	Yes

* For a symmetrical demand and supply diagram