



MARKET ECONOMICS

ECONOMIC SURPLUS; PRODUCER SURPLUS & ESTIMATIONS

CHAPTER [4]

[UNIT-2, OVERALL, PART-22]

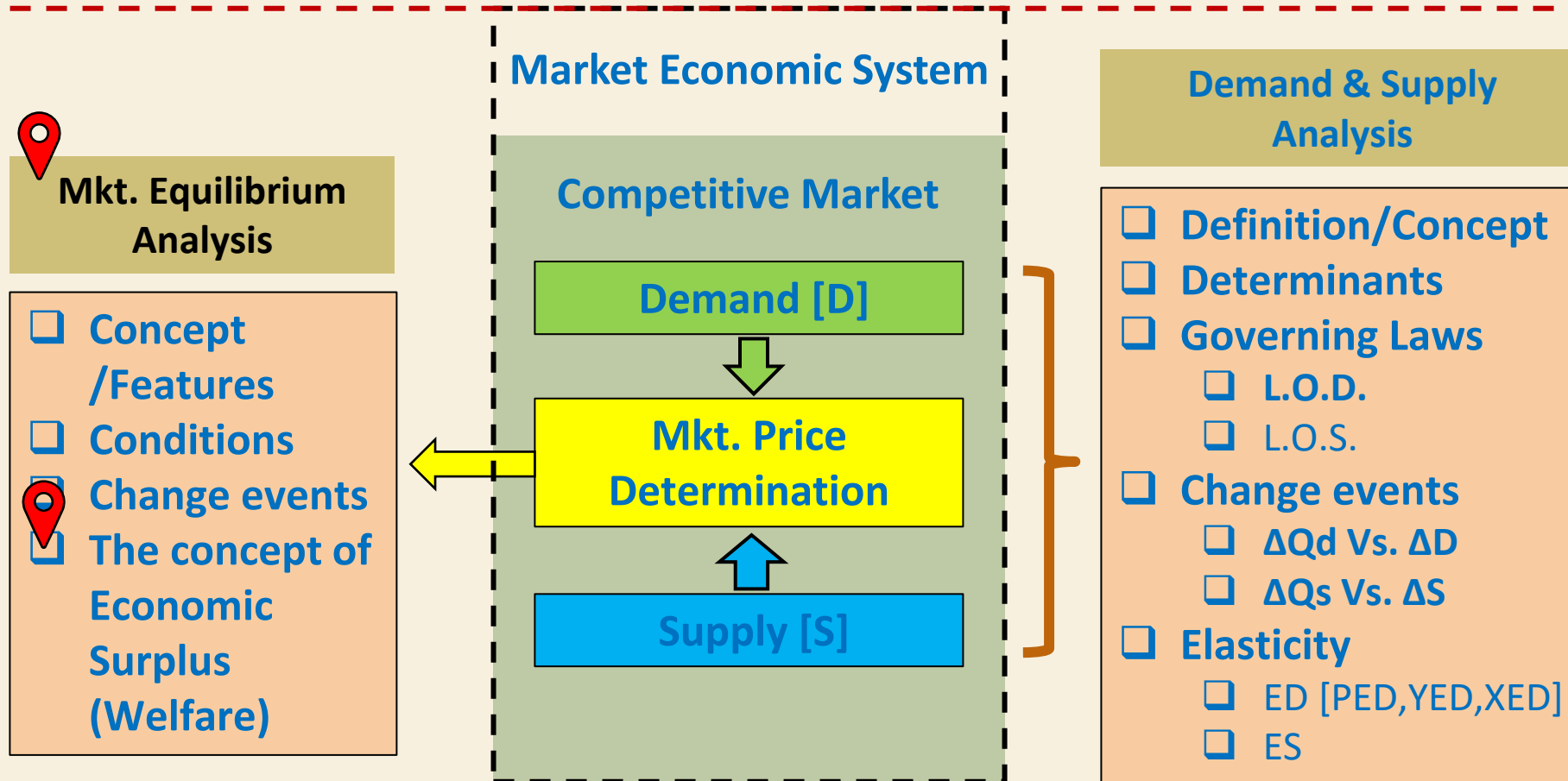
MIND-HUB

ECON-HUB

THEORY

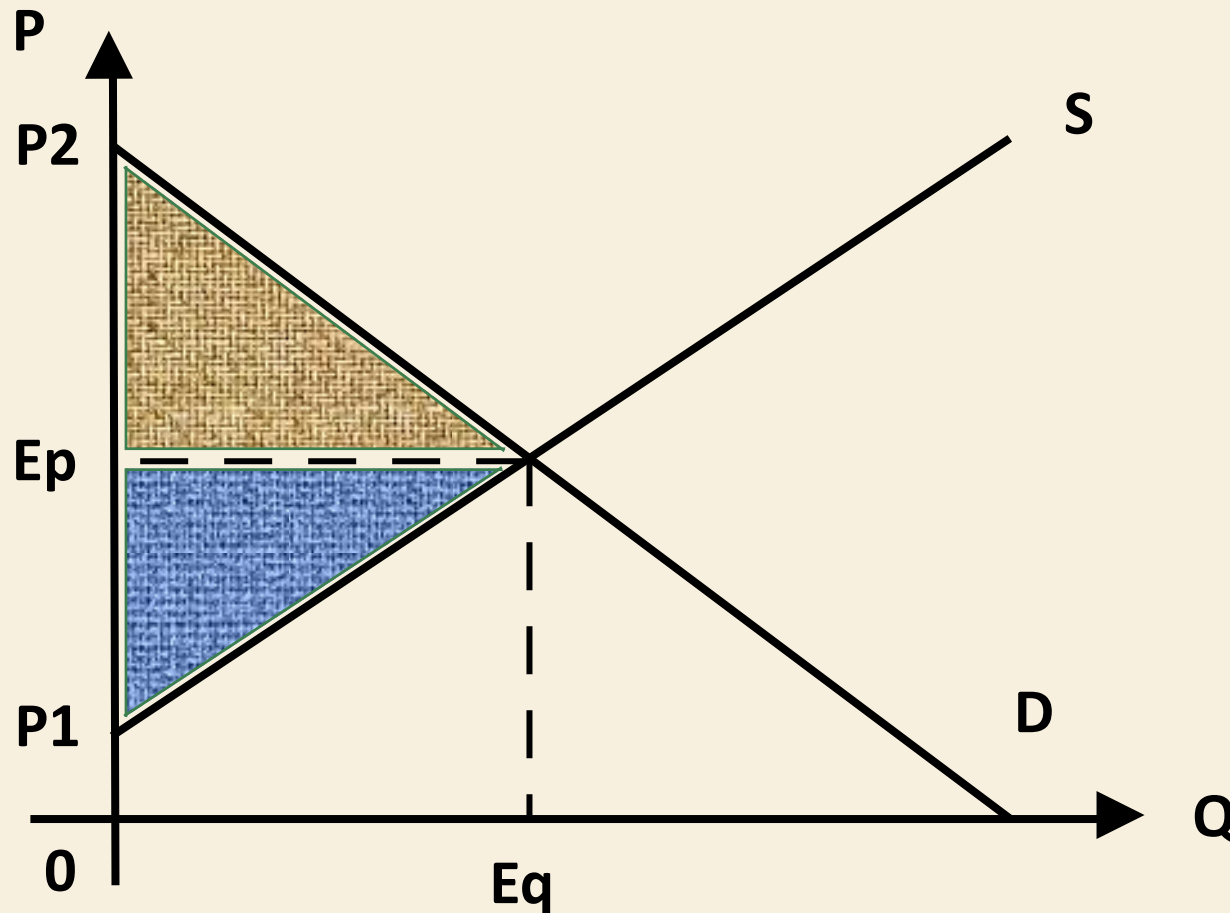
Unit Map - Market Economics [Unit 2]

Microeconomics



Conceptualized by: Imran Hashem

VISUAL REPRESENTATION:



Legends/Meaning of Notations:

P2: Maximum Demand Price

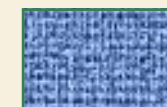
P1: Minimum Supply Price

Ep: Equilibrium Price

Eq: Equilibrium Quantity



Consumer
Surplus (CS)



Producer
Surplus (PS)

PRODUCER SURPLUS (PS)

(Source: Perera, 2020: 161)

Producer surplus is generally viewed as a measure and indicator of welfare that the producers gains from the production of goods and services.

PRODUCER SURPLUS (PS).....

The money value of the producer surplus at the equilibrium level of exchange can be estimated using a supply curve diagram. **This is the area above the supply curve but under the price line up to the amount sold.**

Generic Formula

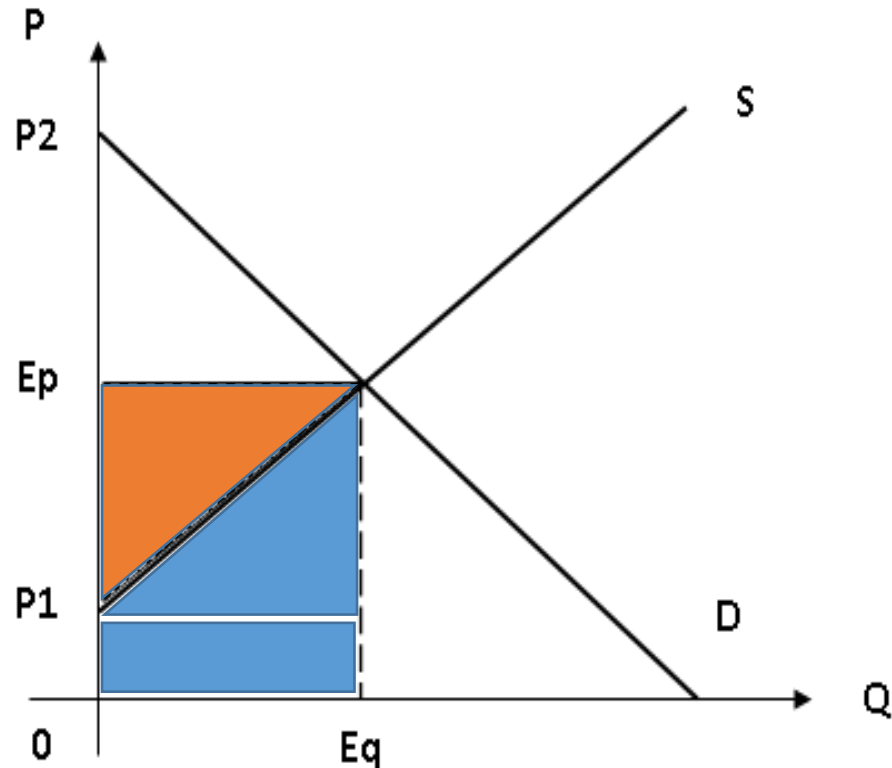
$$\text{Consumer Surplus} = \frac{[E_p - \text{Minimum Supply Price}] \times E_q}{2}$$

OR

$$= [(E_p - \text{Minimum Supply Price}) \times E_q] \times \frac{1}{2}$$

Producer Surplus (PS)

[Alternative Approach]



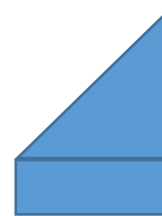
Producer surplus is the **total revenue exceeding the producer's total variable cost**, when producing and selling a certain quantity of a given product.



Total Revenue (TR):

The area below the equilibrium price, up to equilibrium quantity (Gen. a rectangular shape)

$$= E_p \times E_q$$



Total Variable Cost (TVC):

The area below the supply curve, up to equilibrium quantity (Gen. a Trapezium shape)

$$= \frac{[P_2 + E_p]}{2} \times E_q$$



PS = Total Revenue - Total Variable Cost

$$PS = TR - TVC$$

APPLICATION EXERCISE [E18]: PRODUCER SURPLUS

**If the supply function of a given product is represented by the equation:
 $Q_s = -100 + 10P$ and the market clearing price is decided at Rs. 40.00.**

- (I) Construct the supply curve pertaining to this product
- (II) Estimate the value of Total Producer Revenue
- (III) Estimate the value of Total Variable Cost (Total Producer Cost)
- (IV) Estimate the value of Producer Surplus

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Application Exercise [E18]

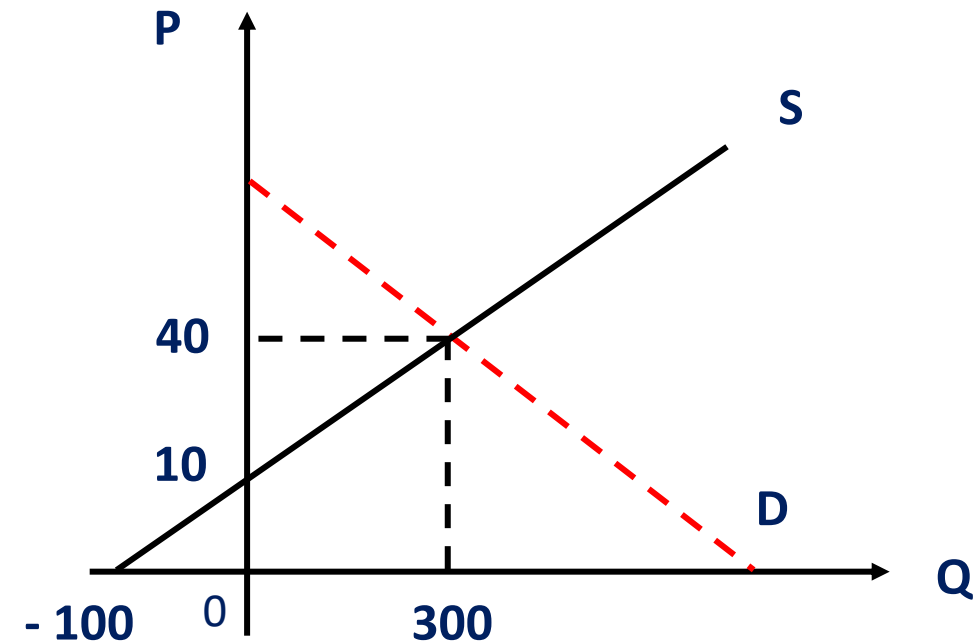
Remember: $Q_s = -100 + 10P$, E_p is Rs. 40.00.

(I) Construct the Supply curve pertaining to this product

Working:

Price (Rs.)

Q_s



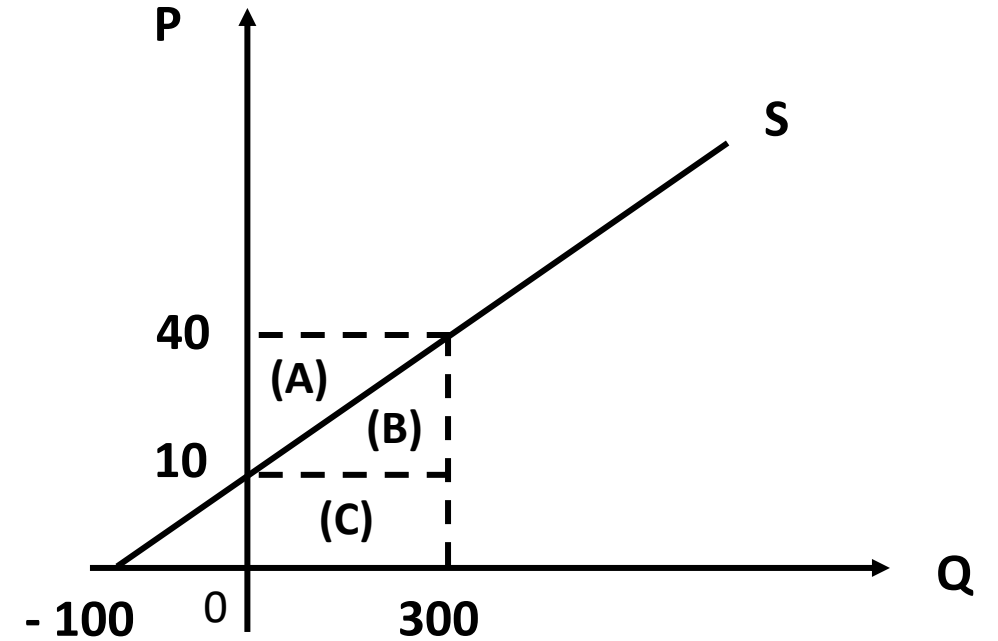
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[in the graph paper grid given p **60**]

(II) Estimate the value of Total Revenue (TR)

(III) Estimate the value of Total Variable Cost (TVC)

(IV) Estimate the value of Producer Surplus (PS)



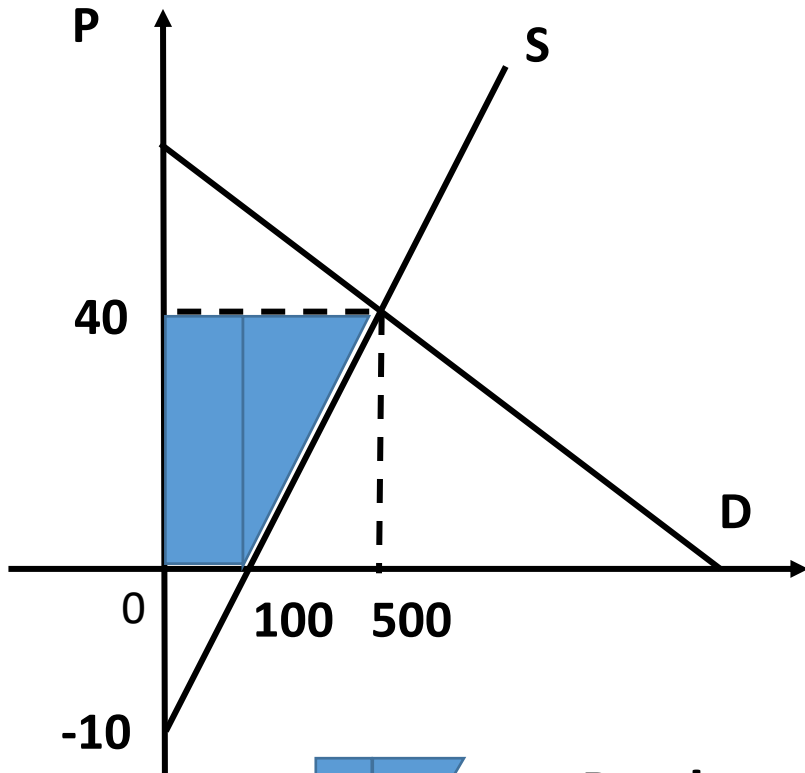
[from the diagram in p 60]

Standard Method:

Special Note:

Supply Elasticity and Producer Surpluses

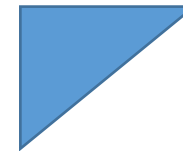
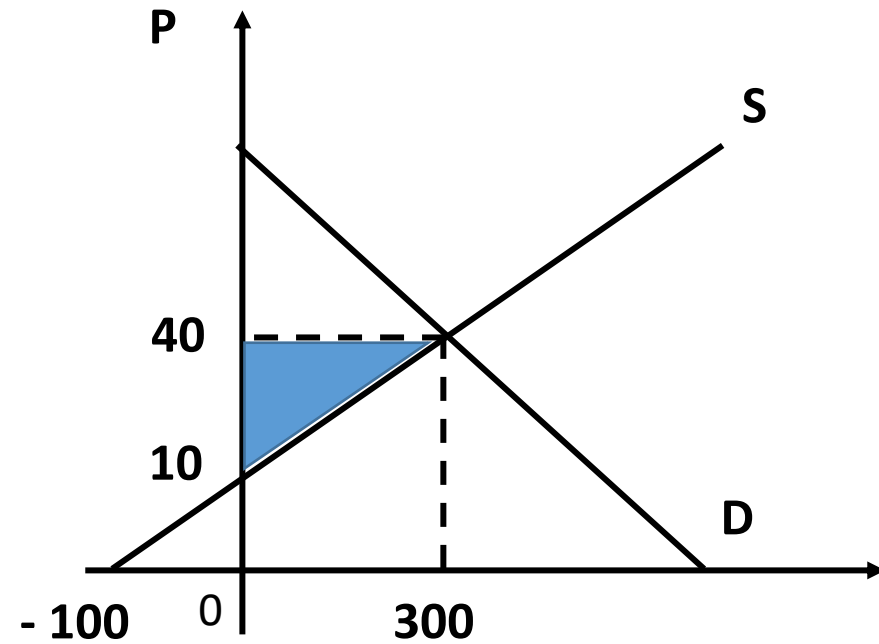
Inelastic Supply Function



Producer Surplus

[Equation: $Q_s = 100 + 10P$]

Elastic Supply Function



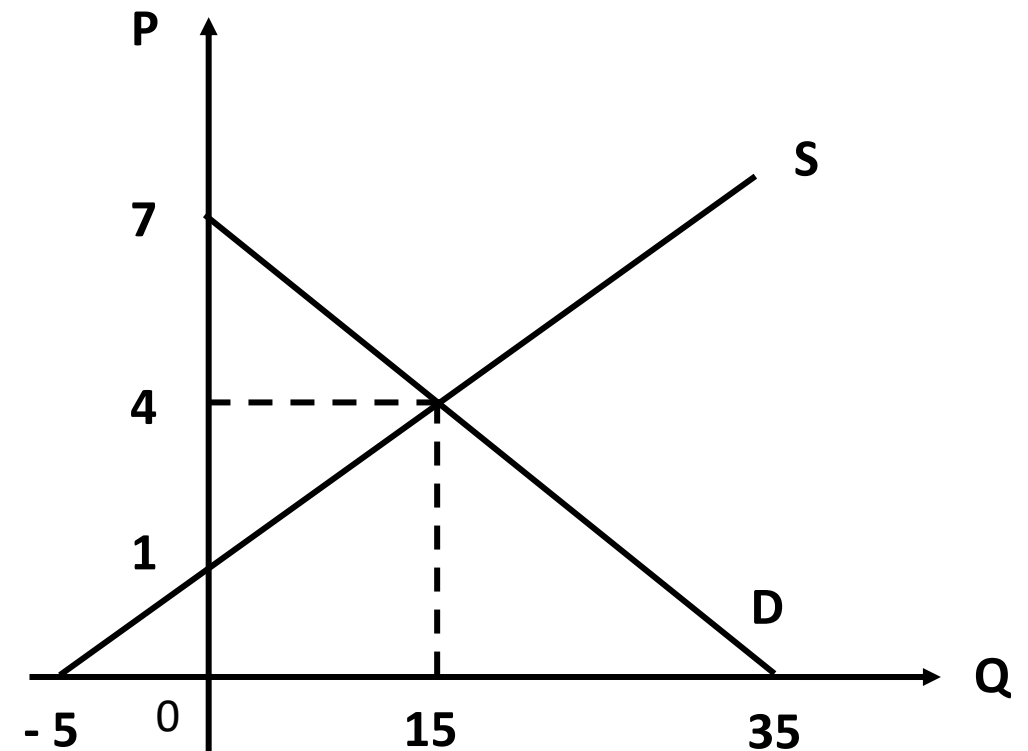
Producer Surplus

[Equation: $Q_s = -100 + 10P$]

[E19] Self Application Exercise: Economic Surplus

Price (Rs)	Qs	Qd	Price (Rs)	Qs	Qd
01	00	30	04	15	15
02	05	25	05	20	10
03	10	20	06	25	05
			07	30	00

Using the above market demand and supply schedule pertaining to a product trisected in a competitive market, estimate the value of economic surplus at equilibrium



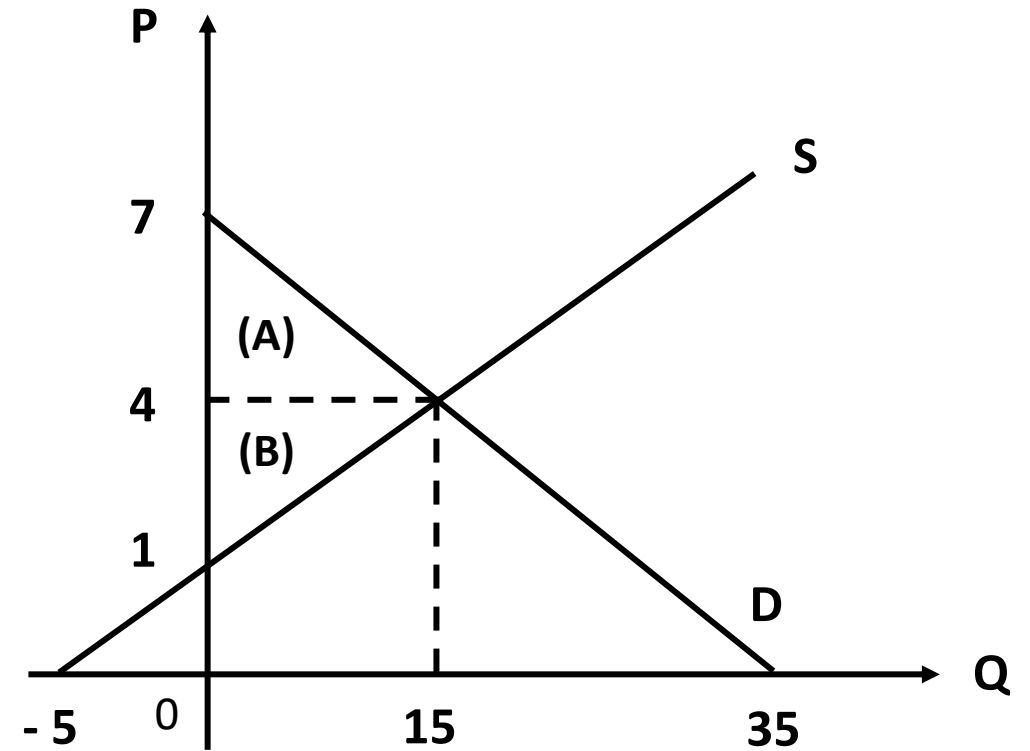
Study Material: P 62

Estimation

CS

PS

Economic Surplus (ES)



Study Material: P 62

The End of Unit (2)

Thank you for your committed and active
participation
Keep up the excellent work

Stay Safe

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**“IF YOU CAN BELIEVE,
YOU CAN ACHIEVE”**