

**Course**  
**on**  
**HS205: consumer Behaviour and Welfare Economics**  
**3<sup>rd</sup> semester**  
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**Instructor**

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# **Lecture 12 Elasticity of Demand and Elasticity of Supply**

## **Elasticity of demand: Meaning**

Elasticity of demand can be defined as the proportionate or percentage change in the quantity demanded as a result of a proportionate or % change in its price, income or prices of other goods

## **Different types of elasticity**

1. Price elasticity of demand
2. Income elasticity of demand
3. Cross elasticity of demand

## Elasticity of demand

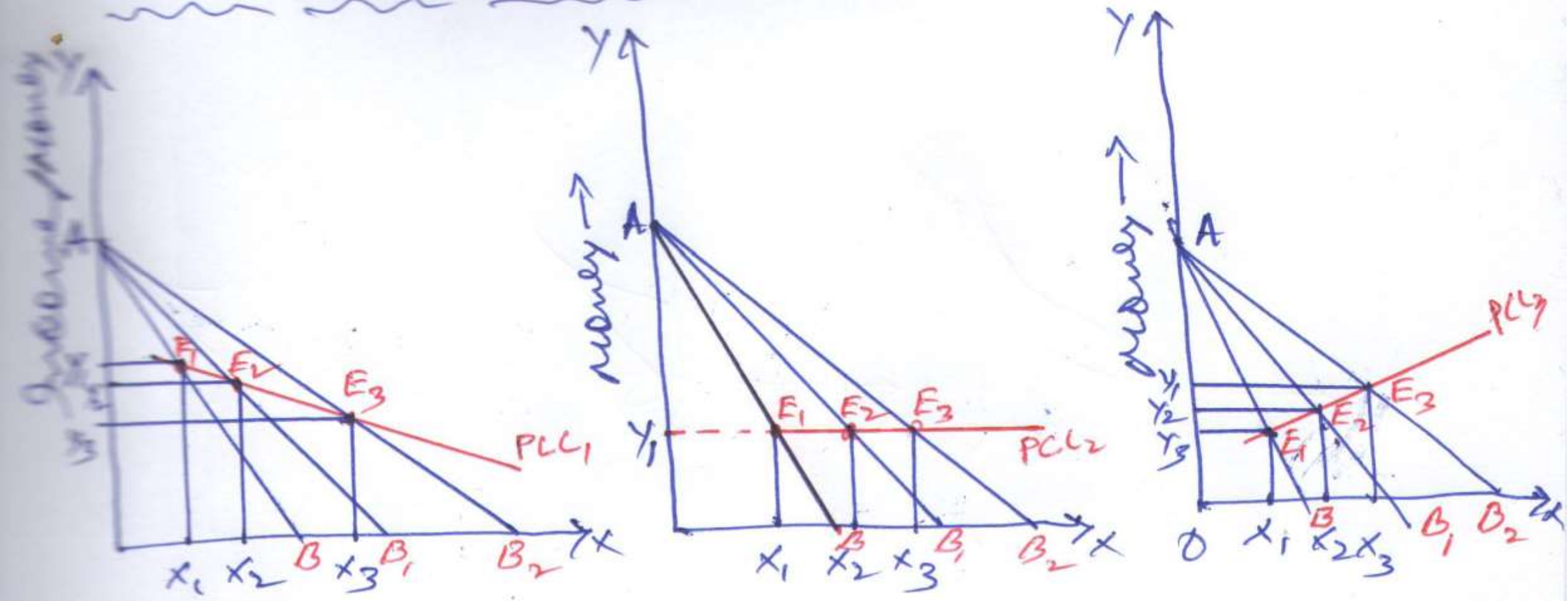
$$1. E_p = \frac{\% \Delta \text{ in demand}}{\% \Delta \text{ in price}} = \frac{\frac{\Delta Q}{Q} \times 100\%}{\frac{\Delta P}{P} \times 100\%} = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q} = \frac{dQ}{dP} \times \frac{P}{Q}$$

$$2. E_y = \frac{dQ}{dy} \times \frac{y}{Q}$$

$$3. E_{xy} = \frac{\% \Delta \text{ in demand}_x}{\% \Delta \text{ in price}_y} = \frac{\frac{\Delta Q_x}{Q_x} \times 100\%}{\frac{\Delta P_y}{P_y} \times 100\%} = \frac{\Delta Q_x}{\Delta P_y} \times \frac{P_y}{Q_x} = \frac{dQ_x}{dP_y} \times \frac{P_y}{Q_x}$$



# Price elasticity & price consumption curve



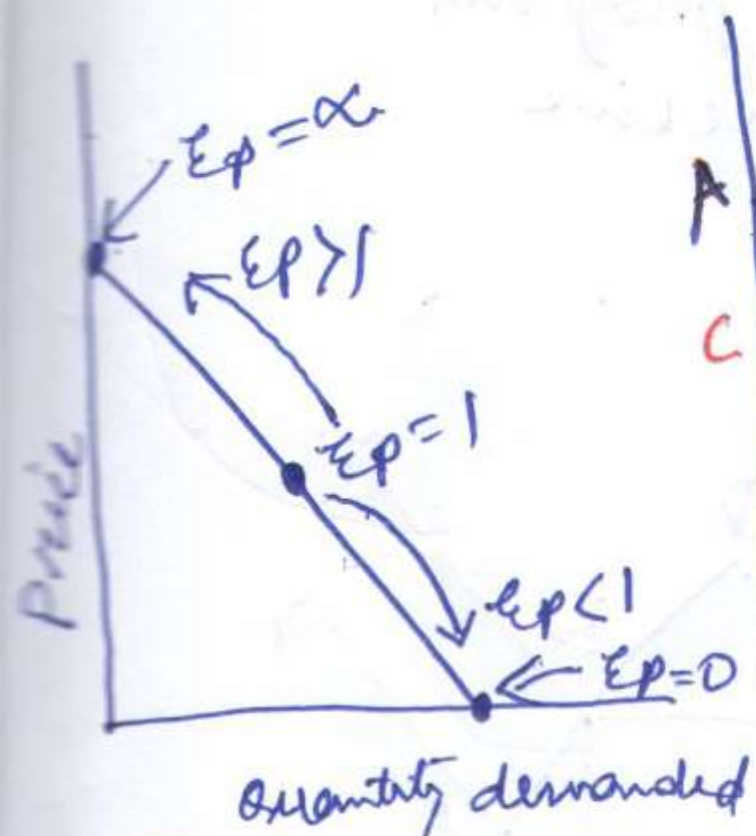


Fig 1

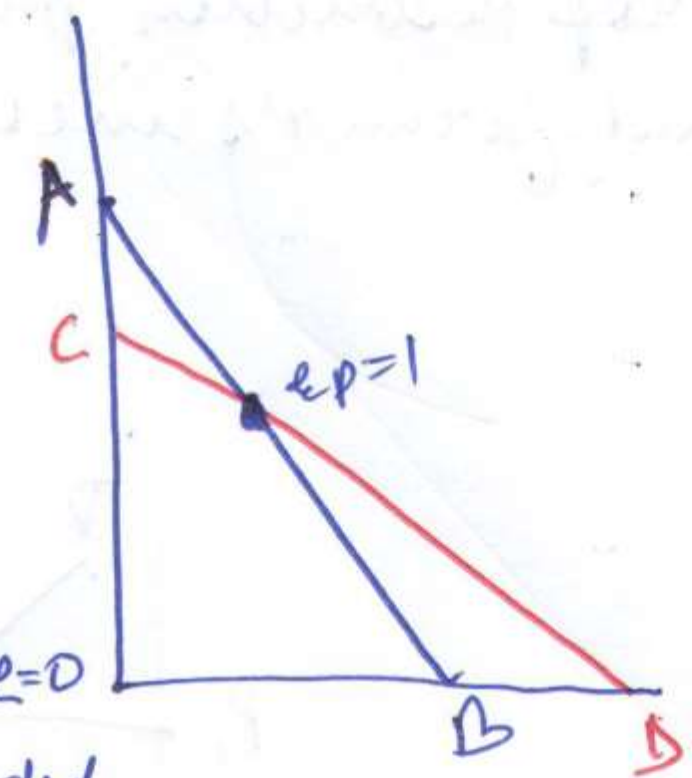


Fig 2

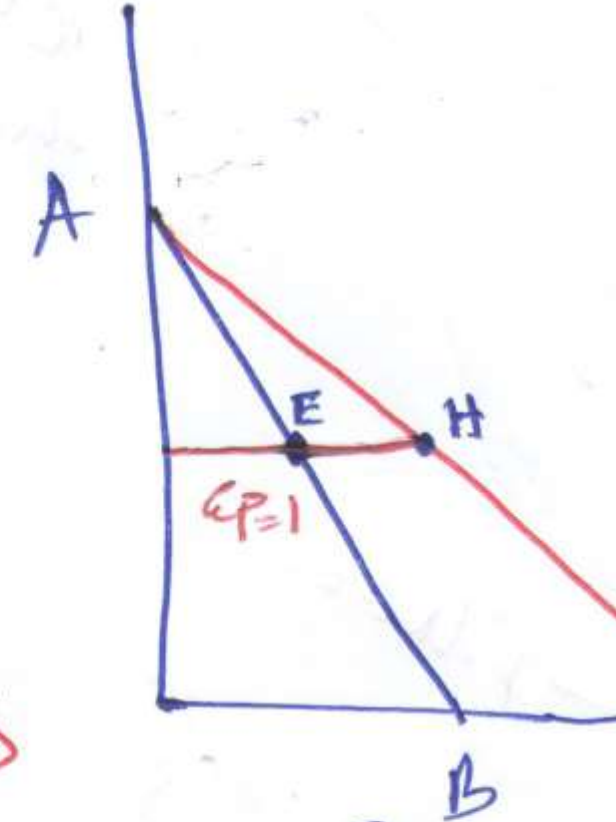


Fig 3

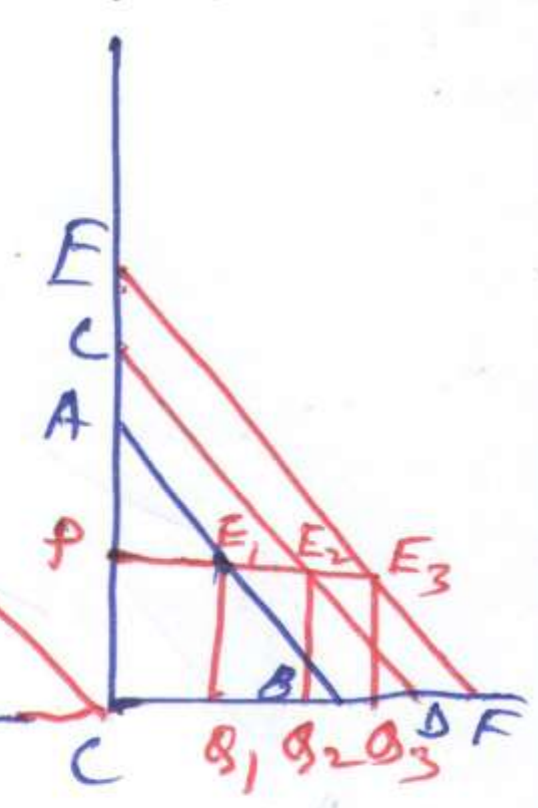
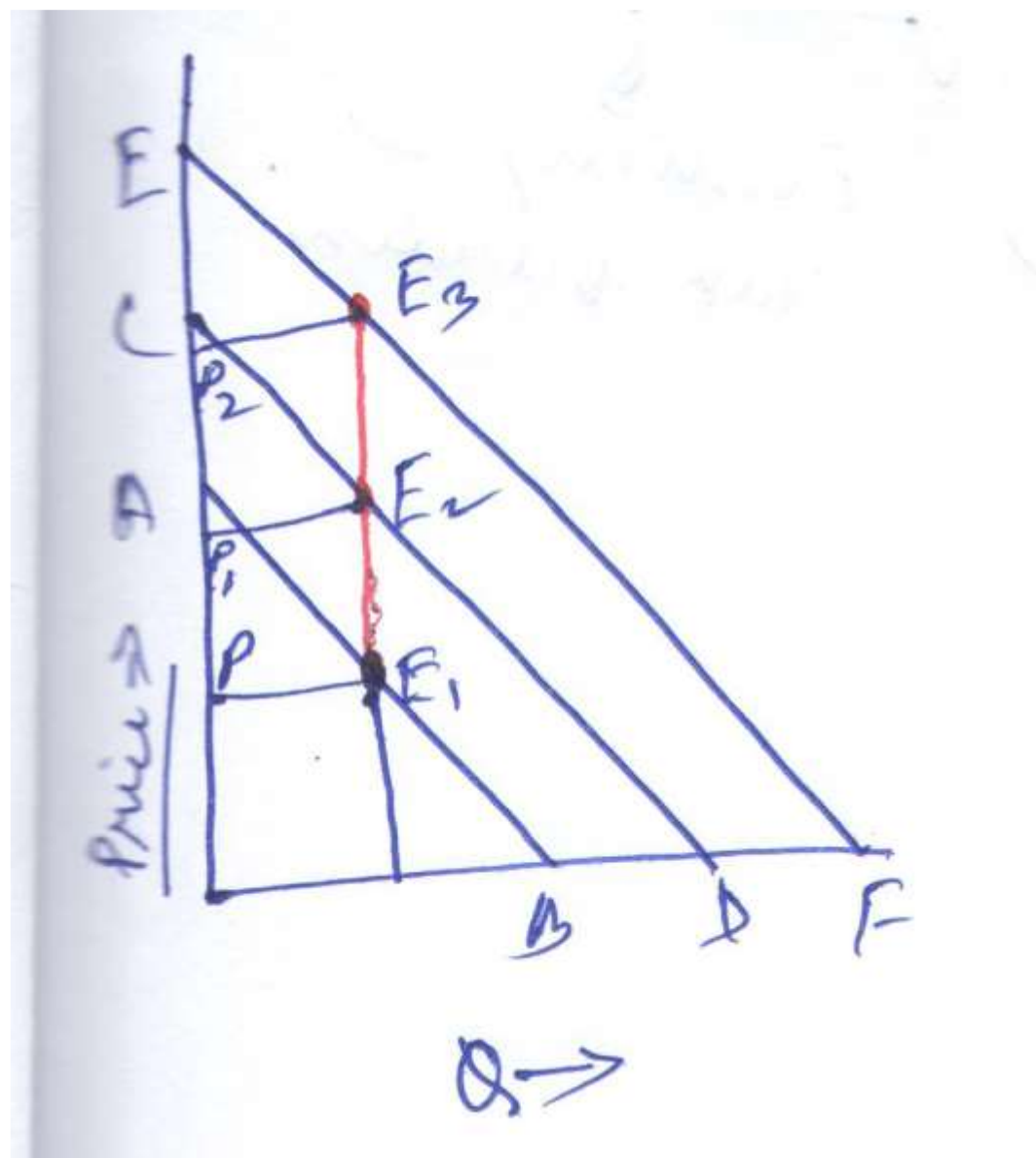
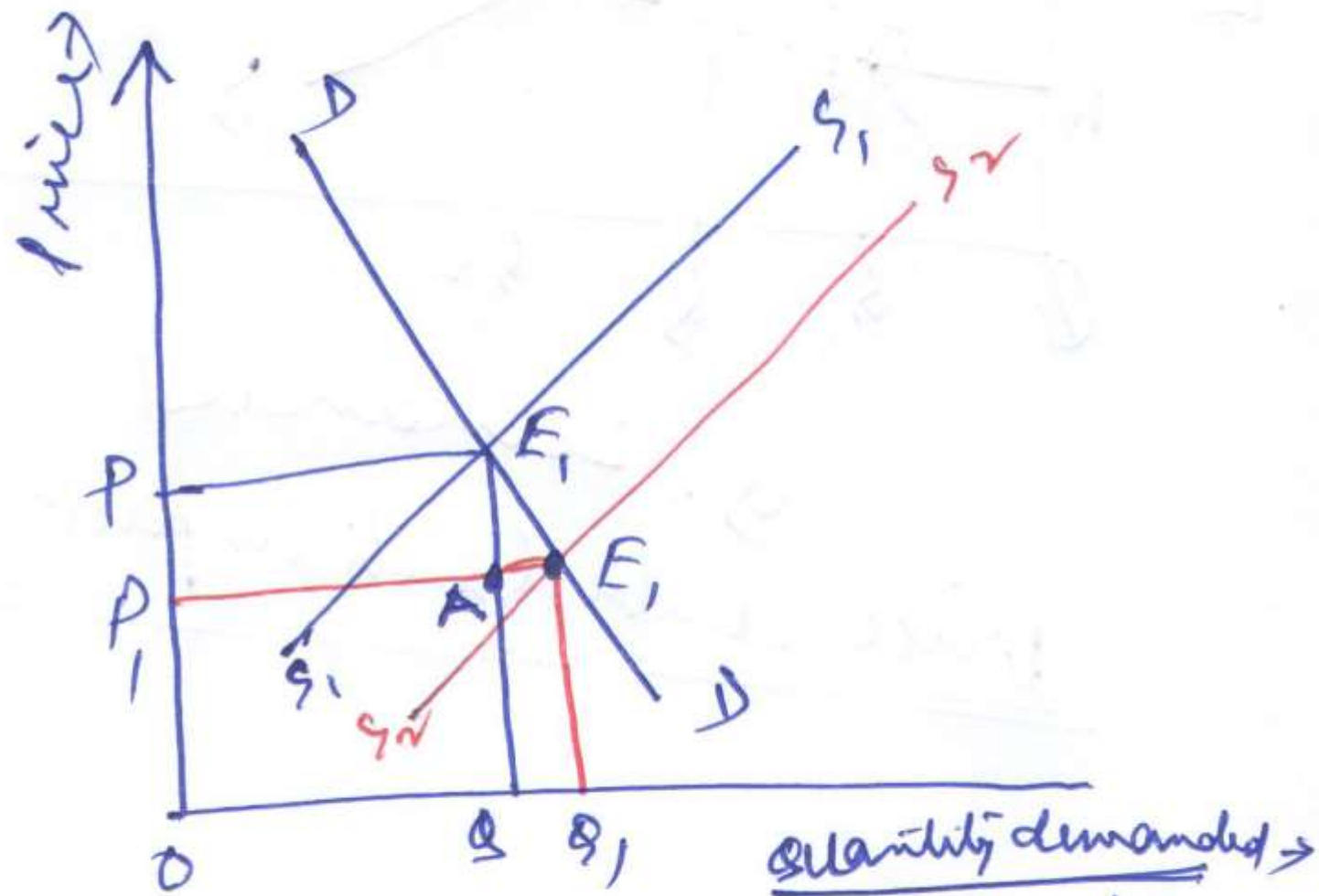


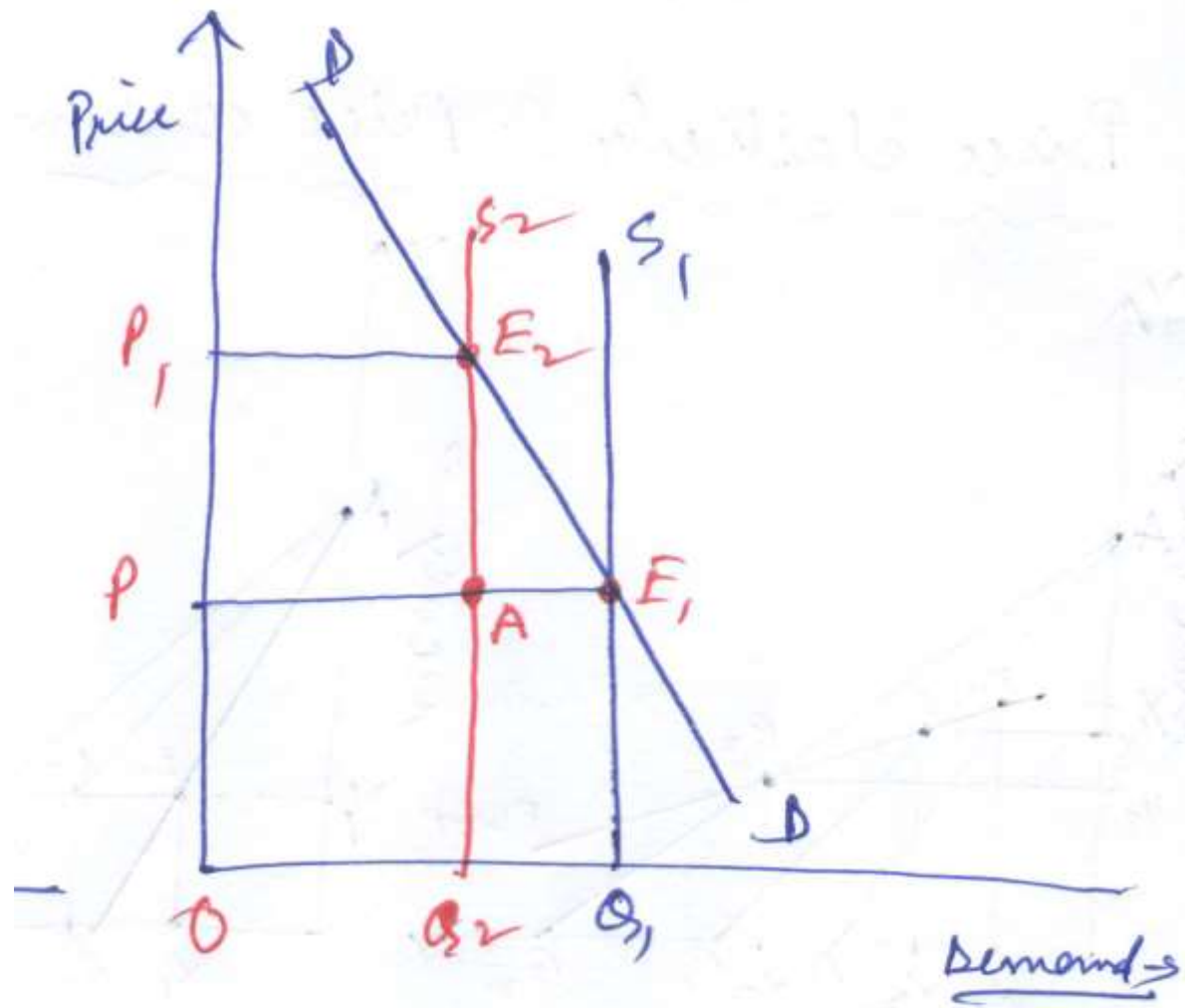
Fig 4



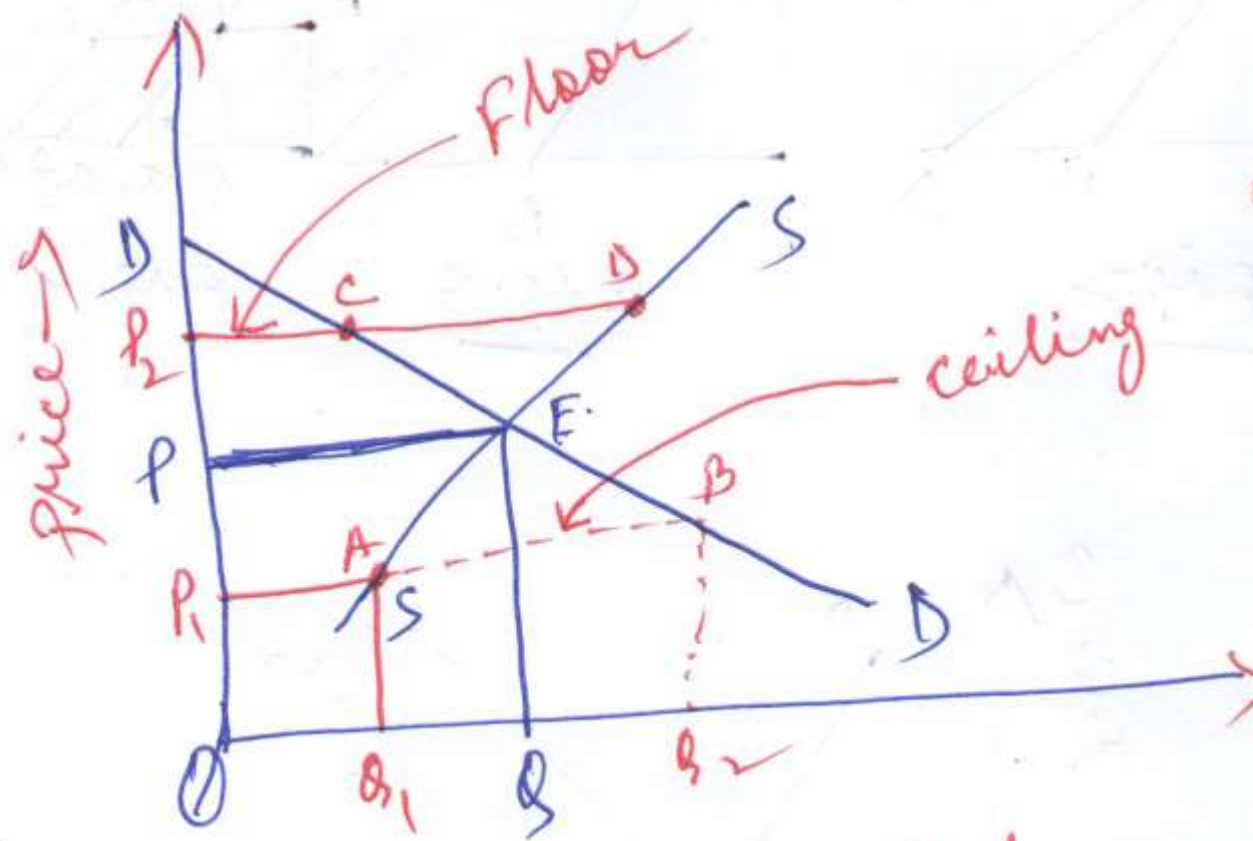




Paradox of poverty amidst plenty

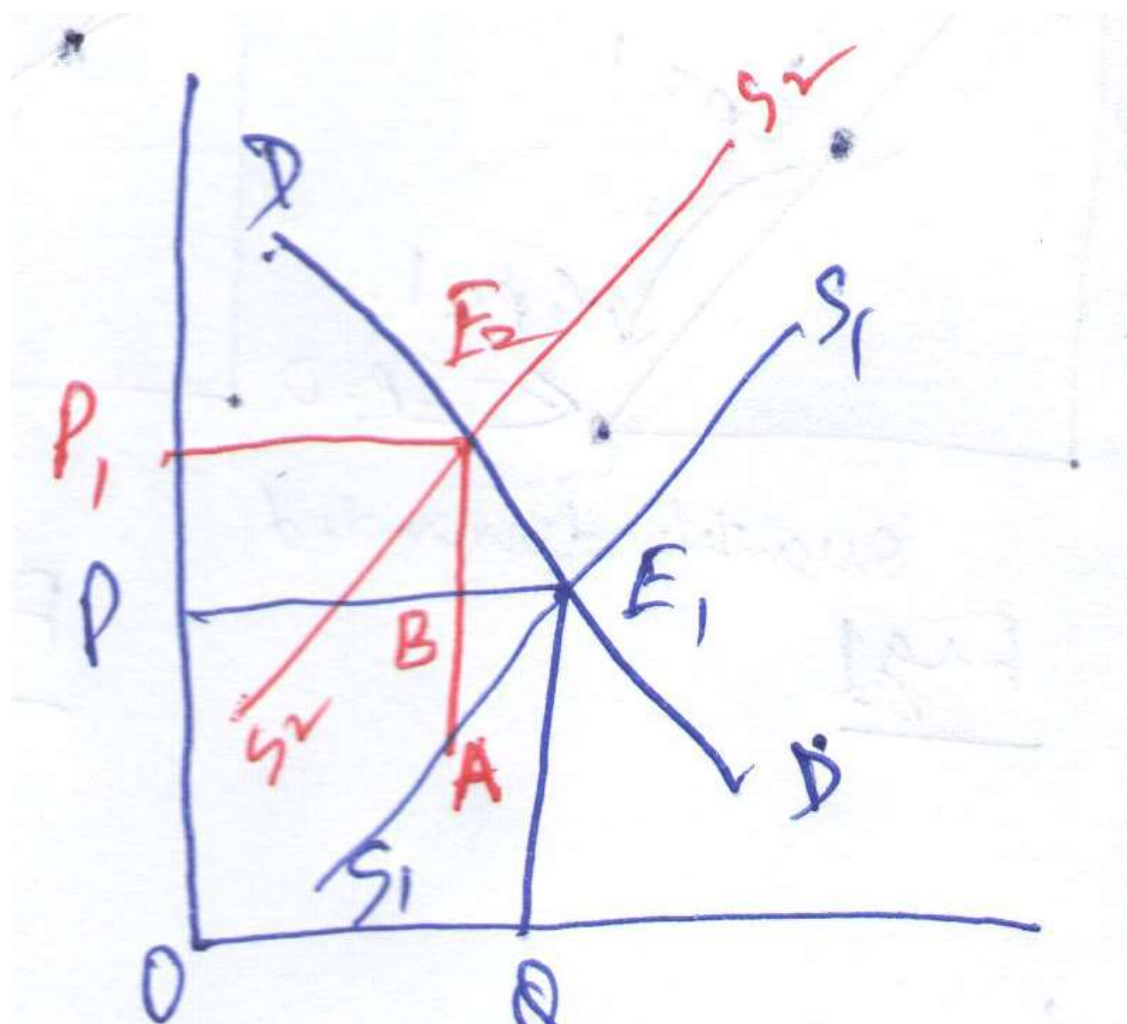


crop restriction program  
and farmer's income



Q. Demand

Price control & its impact



Elasticity &  
Tax burden

