ECO402 Assignment 1 Solution

Fall2021

Price (rupees)	Quantity Demanded (Qd in millions)	Quantity Supplied (Qs in millions)
70	24	16
90	22	18
110	20	20
130	18	22

Requirements:

a) **Using the table given above, illustrate at which price sugar market is in equilibrium. Also show the equilibrium condition graphically.**

According to the above table, the row third of the price which is Rs.110 is the price in which sugar price is in equilibrium. This is just because at that Quantity Demanded and Quantity Supplied are equal.

We can express that equality in as:

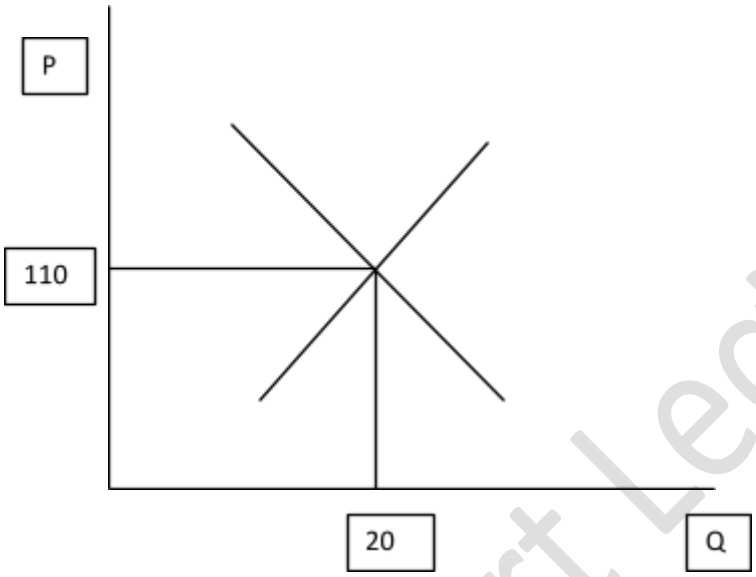
Quantity Demand (Qd) = Quantity Supply (Qs)

20 = 20

Graphically:

We can graphically represent equilibrium condition which is given below:

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a) Calculate elasticity of demand of sugar when price of sugar is Rs.90 and interpret your result.

Price (rupees)	Quantity Demanded (Qd in millions)	Quantity Supplied (Qs in millions)
70	24	16
90	22	18
110	20	20
130	18	22

<u>As we know that Quantity of Demand Formula:</u>

$$Ep = \frac{\Delta Q}{\Delta P} = \frac{P}{Q} x \frac{\Delta Q}{\Delta P}$$

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$$= \frac{\Delta Qd}{\Delta P} x \frac{P}{Q}$$

$$= \frac{-2}{20} x \frac{90}{22}$$

$$= \frac{-11}{10} x \frac{45}{11}$$

$$= -\ 0.1\ x\ 4.09$$

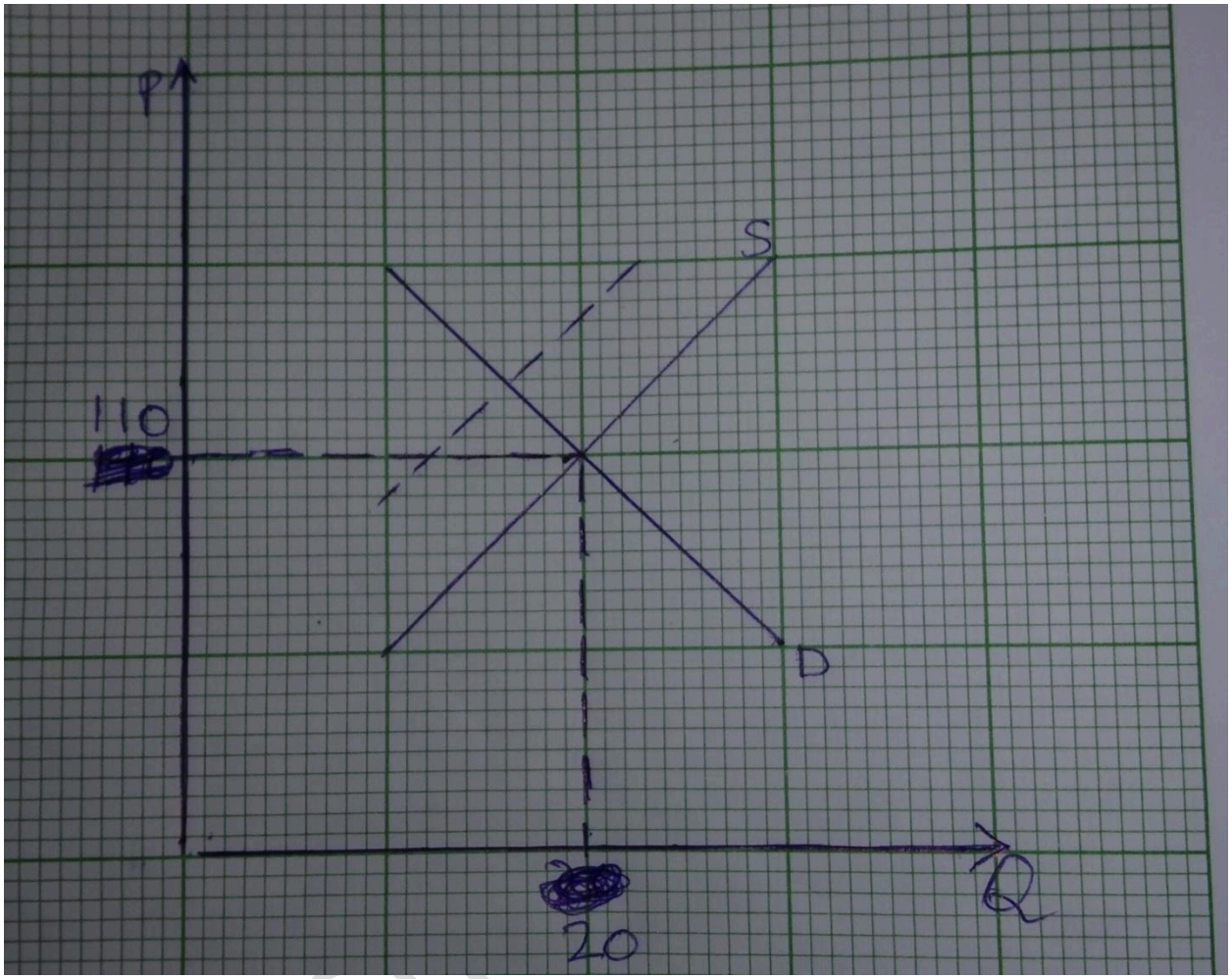
$$= -\ 0.409$$

As elasticity of demand is less than 1 so, the demand is in-elastic.

a) **What will be the effect on the equilibrium situation if cost of production of sugar increases? Illustrate graphically.**

   If the cost of sugar production increases, then there will be decrease in supply and demand. Also supply curve will be shifted towards leftward.

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