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(a) Demand

<table>
<thead>
<tr>
<th>Price</th>
<th>Supply</th>
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<tbody>
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Quantity

(i) The tax makes the supply curve shift to the left. But since the demand is perfectly inelastic, the quantity sold does not change.

(ii) As seen in the graph, the burden falls entirely on consumers.

(b) Price

<table>
<thead>
<tr>
<th>Demand</th>
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</table>

Quantity in the graph

Q₂, Q₁

As the supply curve shifts to the left, the quantity sold decreases from Q₁ to Q₂.

vi) As seen in the graph, the burden of tax falls entirely on suppliers of the good.
Write in the box the number of the question you are answering on this page as it is designated in the examination.

(c) price

The tax revenue is shown in the graph above. Goods are sold at $P_2$ and the tax paid is $(P_2 - P_1)$ for each unit sold. The quantity sold is $Q_1$. So the total tax revenue is $(P_2 - P_1) \times Q_1$. 
Question 2

(a) If consumers buy the same quantity no matter the price is, it means that the demand for good X is perfectly inelastic.

(i) When tax is imposed, the production of good X becomes more expensive and supply decreases and shifts upwards to the left. Since demand is perfectly inelastic the only change will be in prices, but tax doesn’t affect the quantity sold and it remains at its level Qd.

(ii) Consumers now will be paying a higher price for good X, but producers will be still producing the same quantity of good X at the same price and thus the burden of tax will be fully paid by consumers (buyers).

(b) If the demand is perfectly elastic any shift in supply will affect only the quantity sold of the product. After the decrease of supply the price level remains at the same level of P1.
(ii) After the reduction of supply and because of perfect elasticity of demand the sellers are forced to decrease their output from \( Q_1 \) to \( Q_2 \) while buyers continue to buy the good at the same price level. So, the tax burden will be fully paid by producers. 

(c) After the imposition of tax the new price level will be \( P_2 \) which is higher than the initial \( P_1 \) and the new quantity results in the reduction from \( Q_2 \) to \( Q_1 \). Now people will consume only amount of \( Q_2 \) at the price of \( P_2 \). The difference between \( P_2 \) and \( P_1 \) is the value of tax. Total tax revenue is the product of the tax value and the quantity of good consumed: \( T \times Q = Q_2 \times (P_2 - P_1) \).
Write in the box the number of the question you are answering on this page as it is designated in the examination.

(a)\[ P \quad D \quad S \quad S \quad (i) \text{ There will be no change in quantity sold when the tax is imposed because demand is perfectly inelastic; consumers buy the same quantity no matter what the price is.} \]

(b)\[ P \quad S_1 \quad S_2 \quad (i) \text{ The price of the good that consumers pay when the tax is imposed does not change because demand is perfectly elastic.} \]

(ii)\[ 
\text{Since demand is perfectly elastic, the sellers bear the burden of the imposed tax because they cannot increase price.} \]

(c)\[ P \quad D \quad S \quad S \quad (i) \text{ There will be no change in quantity sold when the tax is imposed because demand is perfectly inelastic; consumers buy the same quantity no matter what the price is.} \]