

Issued On:		Past Paper Questions [PPQs]	7 [62 - 68]
Deadline:		Model Questions [MQs]	
Marks : Time	1 mark = 1 ½ Mnt	Units - Essentials Covered	Unit 3

Structured Essay Type Question Answers:

[01] 2015 A/Ls (ECON – II): Q2 (III)

Distinguish between a **price floor** and a **price ceiling** and give an example of each

[04 marks]

Price floors are **minimum prices** set by the government for certain commodities that it believes are being sold in an **unfair** market with **too low** of a price and thus their **producers** deserve some assistance (a better price).

[01 mark]

Examples: Setting a minimum wage
Setting guaranteed prices for agro crops

[01 mark]

A price ceiling is a **maximum price** set by the government for particular goods and services that they believe are being sold at **too high** of a price and thus **consumers** need some **help purchasing** them.

[01 mark]

Examples: Setting maximum prices for some essential consumer goods such as rice, milk powder, bread, passenger transport, LP gas
Maximum interest rate controls
Rent controls

[01 mark] [Total 04 marks]

[02] 2017 A/Ls (ECON – II): Q2 (V)

What are the **economic consequences** of a **maximum price** for an essential consumer good imposed by the government?

[05 marks]

- The creation of a product shortage (or excess demand of the product)
- The tendency for black markets to be created, where the product in shortage will be sold at prices higher than the control price.

[02 marks]

- The inevitable emergence of non-price rationing methods [long ques, rationing card system etc]
- The high cost of searching for goods in shortage: time and money spent
- Welfare effects: the producer surplus shall decrease and consumer surplus may increase.
- Inefficiency in resource allocation
- Parties facing poverty, and parties who are not economically empowered are able afford essential goods under the price control, they were previously unable to buy.
- The revenue of producers shall decrease, as they are forced to sell the product at a lower price

- The government will have to incur additional expenditure to solve the product shortage and make the price ceiling meaningful. In this process the government will have to redirect resources (funds) from other essential services to provide subsidies to the producers of the good under the price control.

[01 mark each, maximum 03 marks]

[Total 05 marks]

[03] 2009 A/Ls (ECON – I - II): Q3

The demand and supply curves for a good sold in competitive market are given by the following equations:

$$Q_d = 30 - 2P$$

$$Q_s = -2 + 2P$$

In the equations above, Q_d and Q_s are the quantities demanded and supplied respectively and P is the price in rupees.

- (I) Determine the equilibrium price and quantity for this market
- (II) Calculate the producer surplus at equilibrium
- (III) What is the price elasticity of demand at equilibrium?

[04 marks each]

- (IV) Suppose the government imposes a floor price equal to Rs. 10 per unit without taking any price supportive action. What will be the excess demand or supply in the market resulting from the floor price?

[03 marks]

- (I) Equilibrium price = Rs. 8.00
Equilibrium quantity = 14 units

Note: The equilibrium price and quantity can be estimated based on equations or a diagram. The method of estimation should be given clearly in order to receive full marks

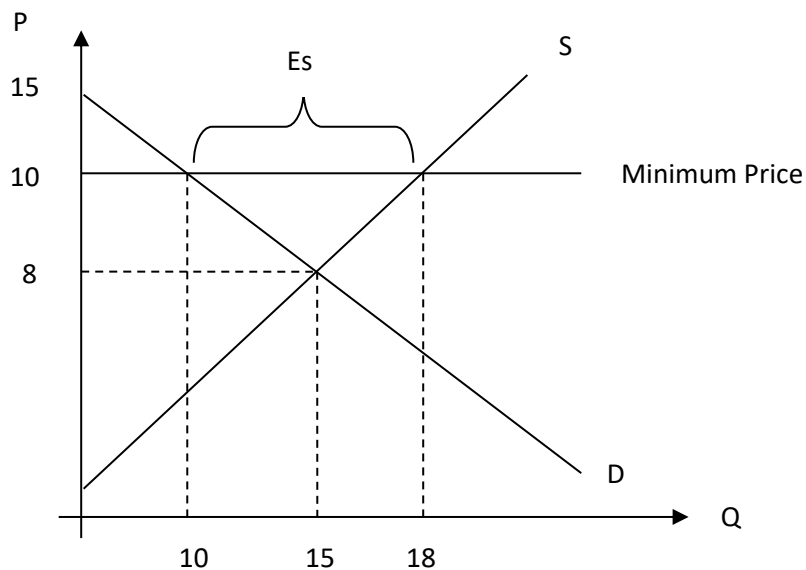
[02 marks each]

(II)	Equilibrium Price - Minimum Supply Price x Equilibrium Quantity	= $\frac{(8.00 - 1.00) \times 14}{2}$	= Rs. <u>49.00</u>
2			

Note: Even if the producer surplus is correctly estimated based the equilibrium diagram full marks will be allocated.

(III)	PED	=	$\frac{\text{Change in Quantity}}{\text{Change in Price}}$	X	$\frac{\text{Relevant Price}}{\text{Relevant Quantity}}$
			= <u>-1.14</u>		

(IV) The excess demand and supply should be estimated based equations or the diagram; marks will not be allocated if only the values are presented. When the minimum price ceiling is decided at Rs.10.00 the quantity demanded is 10 units and the quantity supplied is 18 units, accordingly there will be an excess supply 8 units.





[04] 2008 A/Ls (ECON – I - II): Q4 (II)

The market supply and demand for lime are described by the following equations:

Supply: $Q_s = -10 + 20P$ Demand: $Q_d = 50 - 10P$

(Price (P) is in rupees and quantity (Q) is lime per week in millions)

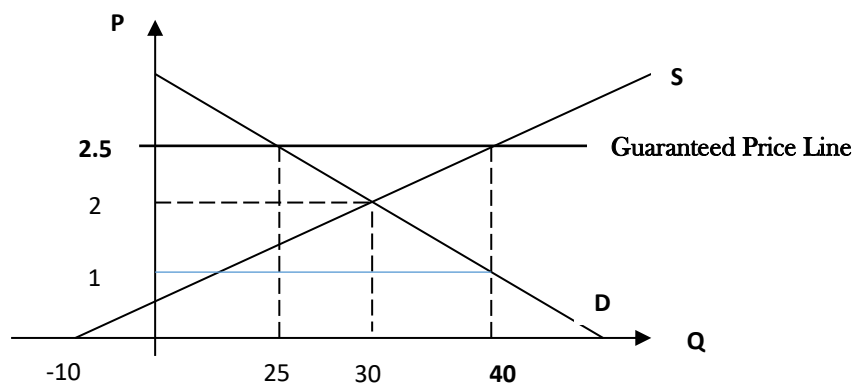
- (A) Draw the market supply and demand curves in a diagram
- (B) What are the market equilibrium price and quantity?
- (C) Suppose the government decides to offer the farmers a guaranteed price of Rs. 2.50 per lime. How much lime will the farmers supply now?
- (D) What will be the market price when the total output comes to the market?

[02 marks each]

- (E) How much total money will the farmers receive from the government each week?

[03 marks]

(A)



[02 marks]

- (B) Equilibrium price - Rs.2.00
- Equilibrium quantity - 30 million limes

[Should be estimated using the diagram or the equations]

[01 mark each]

- (C) The farmers will supply **40 million** limes at this guaranteed price (the answer can be derived based on the diagram or equations)

[02 marks]

- (D) The **market price** ($Q_d = Q_s$) is **Rs.1.00** (based on the diagram or equations)

[02 marks]

- (E)** The total amount of money received from the government on a weekly basis will be Rs. 60 million (1.50 x 40), The price is estimated as government guaranteed price minus the price the buyers are willing to pay to buy the supply of 40 million limes (2.50 – 1.00 = 1.50)

[03 marks]

Note: Ideally the term “Deficiency Payment” should be used in the question

[05] 2010 A/Ls (ECON – I - II): Q3 (IV)

Assume that the market demand curve for sugar is $Q_d = 260 - 3P$ and the market supply curve of sugar is $Q_s = -140 + 2P$

- (a) Suppose the government imposes an excise tax of Rs. 5 per unit of sugar. What is the price the consumers pay for a unit of sugar after the tax is implemented

[02 marks]

- (b) What is the change in consumer surplus as a result of the tax?

[04 marks]

(IV) (a) $Q_d = 260 - 3P$ $Q_s = -140 + 2P$

P_b = Consumers (buyers) price

P_s = Producers (suppliers) price

P_b = $P_s + T$ T = Amount of tax

P_s = $P_b - T$

$$260 - 3P_b = -140 + 2(P_b - T)$$

$$260 - 3P_b = -140 + 2(P_b - 5)$$

$$260 - 3P_b = -140 + 2P_b - 10$$

$$410 = 5P_b$$

$$82 = P_b$$

Consumer Price = **82.00** **(2 marks)**

- (b) **Change in consumer surplus after the tax**

Consumer surplus (before tax)

Market price (before tax) = 80.00

Quantity purchased (before tax) = 20 Units

$$\text{Consumer surplus} = \frac{(86.67 - 80.00) \times 20}{2} = \underline{\underline{66.67}} \quad \text{(1 marks)}$$

Consumer surplus (after tax)

$$\begin{aligned} \text{Market price (before tax)} &= 82.00 \\ \text{Quantity purchased (before tax)} &= 14 \text{ Units} \end{aligned}$$

$$\text{Consumer surplus} = \frac{(86.67 - 82.00) \times 14}{2} = \underline{\underline{32.62}} \quad \text{(1marks)}$$

$$\text{Change in consumer surplus} = (66.67 - 32.62) = \underline{\underline{34.04}} \quad (34.00) \quad \text{(2 marks)}$$

Note: The change in the consumer surpluses can be estimated using the equilibrium diagram before and after adjusting for the R.5.00 unit tax on domestic trade.

➔ [06] 2013 A/Ls (ECON – II): Q2 (III - V)

(III) Some of the data relevant for market demand and supply are given below:

Price (Rs)	Quantity Demanded (Qd)	Quantity Supplied (Qs)
4.00	84	12
8.00	68	44

Assuming that both demand and supply curves are linear, derive the equations for market demand and supply curves.

[04 marks]

(IV) Compute the equilibrium price and quantity using demand and supply equations

[04 marks]

(V) Assuming that the government imposes a specific tax of Rs. 3 per unit and compute the price received by the producer after the tax and the tax revenue of the government.

[04 marks]

(06) (III)

$$\begin{aligned} Q_d &= a - bP \\ Q_d &= 100 - 4P \end{aligned} \quad (02 \text{ marks})$$

$$\begin{aligned} Q_s &= a + bP \\ Q_s &= -20 + 8P \end{aligned} \quad (02 \text{ marks})$$

(IV)

$$\begin{aligned} Q_d &= Q_s \\ 100 - 4P &= -20 + 8P \\ 120 &= 12P \\ \underline{10} &= P \end{aligned} \quad (02 \text{ marks})$$

$$\begin{aligned} Q_d &= 100 - 4P \\ &= 100 - (4 \times 10) \\ &= \underline{60} \end{aligned} \quad (02 \text{ marks})$$

(V)

$$\begin{aligned} Q_d &= 100 - 4P_b && (P_b = \text{Buyers Price}) \\ Q_d &= -20 + 8P_s && (P_s = \text{Suppliers Price}) \end{aligned}$$

$$\begin{aligned} P_b &= P_s + T \text{ (Unit Tax)} \\ 100 - 4(P_s + T) &= -20 + 8P_s \\ 100 - 4(P_s + 3) &= -20 + 8P_s \\ 100 - 4P_s - 12 &= -20 + 8P_s \\ 108 &= 12P_s \\ \underline{9} &= P_s \end{aligned} \quad (02 \text{ marks})$$

Government Tax Revenue

$$\begin{aligned} &= [Q_s = -20 + (8 \times 9)] \quad \times \quad 3 \\ &= 52 \quad \times \quad 3 \\ &= \underline{156} \end{aligned} \quad (02 \text{ marks})$$

[07] 2015 A/Ls (ECON – II): Q2 (V)

The following equation describes the market demand and supply functions of a commodity:

$$Q_d = 100 - 4P \text{ (Demand)} \qquad Q_s = -30 + 6P \text{ (Supply)}$$

(a) Calculated the equilibrium price and quantity using the equations and show this equilibrium accurately on a graph

[02 marks]

(b) Calculate producer surplus and consumer surplus at market equilibrium and show them on a graph

[02 marks]

(V) (a) $Q_d = Q_s$
 $100 - 4P = -30 + 6P$
 $100 + 30 = 6P + 4P$
 $130 = 10P$
 Therefore: $P = \underline{13}$

$P = 13$
 $Q_d = 100 - 4P$
 $= 100 - (4 \times 13)$
 $= \underline{48}$

$E_p: \text{ Rs. } 13.00$
 $E_q: \text{ 48 Units}$

$P = 13$
 $Q_s = -30 + 6P$
 $= -30 + (6 \times 13)$
 $= \underline{48}$

[01 mark each]

(B) Producer Surplus

$$\frac{\left[\begin{array}{cc} \text{Equilibrium Price} & - & \text{Minimum Supply Price} \end{array} \right] \times \text{Equilibrium Quantity}}{2}$$

$$= \frac{(13.00 - 5.00) \times 48}{2} = \text{Rs. } \underline{192.00}$$

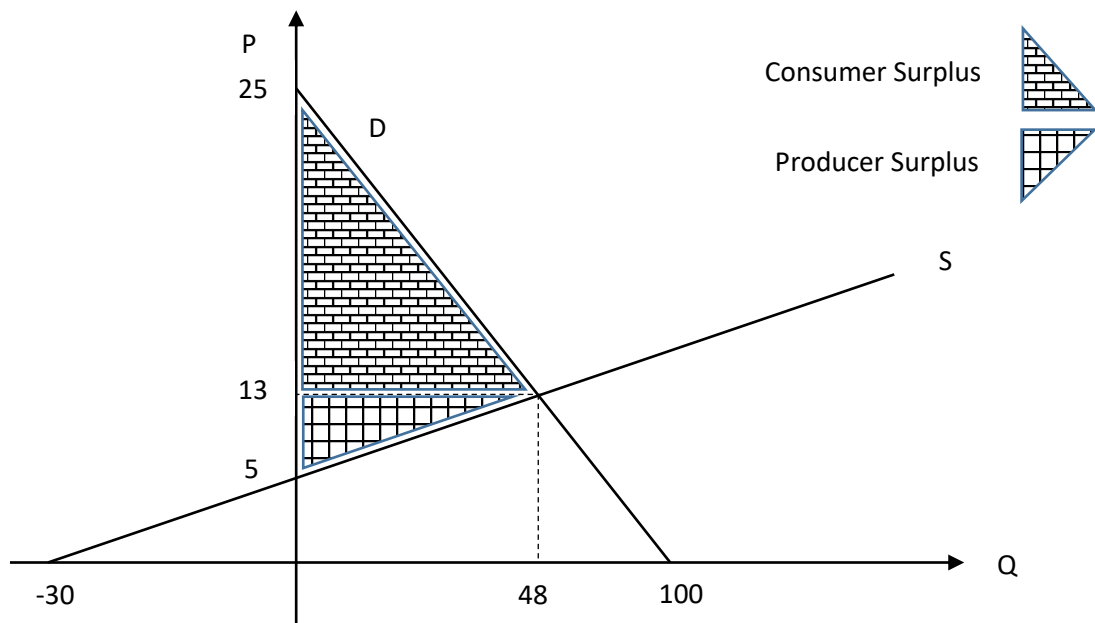
[½ mark]

Consumer Surplus

$$\frac{\left[\begin{array}{c} \text{Maximum Demand} \\ \text{Price} \end{array} - \begin{array}{c} \text{Equilibrium} \\ \text{Price} \end{array} \right] \times \text{Equilibrium} \\ \text{Quantity}}{2}$$

$$= \frac{(25.00 - 13.00) \times 48}{2} = \text{Rs. } \underline{\underline{288.00}}$$

[½ mark]



Properly constructed diagram (on graph paper), indicating the correct areas of Consumer and Producer surplus ½ mark each, subtotal 01 mark

Answer Grid [MCQs]

Question	Answer	Question	Answer
01	3	11	4
02	3	12	1
03	1	13	3
04	4	14	2
05	5	15	2
06	2		
07	2		
08	2		
09	1		
10	5		

Answer Grid [OTQs]

Question	Answer	Question	Answer
16	True	21	True
17	True	22	True
18	True	23	True
19	True	24	True
20	True	25	False

Mind-ventures ‘Econ-Hub’

Hope you have been proactive and smart enough to have attempted the **SEQs** from these PAs **‘Pen on Paper’**