

Semester “Spring 2011”

Economics (ECO401)

Assignment No.01

Marks: 20

Question:

Suppose the market demand and market supply for Levis jeans is given by the following equations:

$$Q_d = 5000 - 2.5P$$

$$Q_s = 4000 + 1.5P$$

- A. Find quantity demanded when price is Rs. 250, Rs. 450 and Rs. 650.
- B. Find quantity supplied when price is Rs. 200, Rs. 400 and Rs. 600.
- C. Find equilibrium price and equilibrium quantity with the help of above equations.
- D. Show the equilibrium condition in Levis jeans market graphically.

Marks: A=3(1 for each value), B=3(1 for each value), C=8(4 for each value), D=6

Solution Part A:

I- Quantity demanded at price= Rs 250

$$\begin{aligned} Q_d &= 5000 - 2.5(250) \\ &= 5000 - 625 \\ &= 4375 \end{aligned}$$

II- Quantity demanded at price= Rs 450

$$\begin{aligned} Q_d &= 5000 - 2.5(450) \\ &= 5000 - 1125 \\ &= 3875 \end{aligned}$$

III- Quantity demanded at price= Rs 650

$$\begin{aligned} Q_d &= 5000 - 2.5(650) \\ &= 5000 - 1625 \\ &= 3375 \end{aligned}$$

Solution Part B:

I- Quantity supplied at price= Rs 200

$$\begin{aligned} Q_s &= 4000 + 1.5(200) \\ &= 4000 + 300 \\ &= 4300 \end{aligned}$$

II- Quantity supplied at price= Rs 400

$$\begin{aligned} Q_s &= 4000 + 1.5(400) \\ &= 4000 + 600 \\ &= 4600 \end{aligned}$$

III- Quantity supplied at price= Rs 600

$$\begin{aligned} Q_s &= 4000 + 1.5(600) \\ &= 4000 + 900 \\ &= 4900 \end{aligned}$$

Solution Part C:

Since equilibrium condition is:

$$Q_s = Q_d$$

$$\begin{aligned} 4000 + 1.5P &= 5000 - 2.5P \\ 1.5P + 2.5P &= 5000 - 4000 \\ 4P &= 1000 \\ \mathbf{P} &= \mathbf{250} \end{aligned}$$

By putting $P=250$ in Q_d equation:

$$\begin{aligned} Q_d &= 5000 - 2.5(250) \\ Q_d &= 5000 - 625 \\ \mathbf{Q_d} &= \mathbf{4375} \end{aligned}$$

By putting $P=250$ in Q_s equation

$$\begin{aligned} Q_s &= 4000 + 1.5(250) \\ Q_s &= 4000 + 375 \\ \mathbf{Q_s} &= \mathbf{4375} \end{aligned}$$

Solution Part D:

