

**Exercise 01**

Following equations shows demand and supply of a hypothetical market.

$$Q_d = 100 - 5p$$

$$Q_s = -40 + 5p$$

1. Calculate equilibrium price and quantity.
2. Show equilibrium price and quantity in a diagram.
3. If government impose a price floor of Rs.16/- show it in the diagram.
4. What is the excess supply at price floor of Rs.16/-?
5. Suppose there is a price support system that purchase excess supply by the government (intervention buying program).
  - a. What is the government expenditure to execute this program?
  - b. What is the consumer surplus after this program?
  - c. What is the producer surplus after this program?
  - d. What is the dead weight loss of this program?
6. Suppose government implements a guaranteed price at Rs. 16 and execute deficiency payment system instead of intervention buying program.
  - a. What is the new market price after the deficiency payment system?
  - b. What is the deficiency payment per unit?
  - c. What is the total deficiency payment of the government?
  - d. What is the consumer surplus after the deficiency payment system?
  - e. What is the producer surplus after the deficiency payment system?
  - f. What is the dead weight loss of this deficiency payment system?

**Exercise 02**

Following equations shows demand and supply of a hypothetical market.

$$Q_d = 276 - 2p$$

$$Q_s = -24 + 3p$$

1. Calculate equilibrium price and quantity.
2. Show equilibrium price and quantity in a diagram.
3. If government impose a price floor of Rs.66/- show it in the diagram.
4. What is the excess supply at price floor of Rs.66/-?

5. Suppose there is a price support system that purchase excess supply by the government (intervention buying program).
  - a. What is the government expenditure to execute this program?
  - b. What is the consumer surplus after this program?
  - c. What is the producer surplus after this program?
  - d. What is the dead weight loss of this program?
6. Suppose government implements a guaranteed price at Rs. ~~46~~<sup>66</sup> and execute deficiency payment system instead of intervention buying program.
  - a. What is the new market price after the deficiency payment system?
  - b. What is the deficiency payment per unit?
  - c. What is the total deficiency payment of the government?
  - d. What is the consumer surplus after the deficiency payment system?
  - e. What is the producer surplus after the deficiency payment system?
  - f. What is the dead weight loss of this deficiency payment system?

### **Exercise 03**

Following equations shows demand and supply of a hypothetical market.

$$Q_d = 480 - 4p$$

$$Q_s = -20 + p$$

1. Calculate equilibrium price and quantity.
2. Show equilibrium price and quantity in a diagram.
3. If government impose a price floor of Rs.120/- show it in the diagram.
4. What is the excess supply at price floor of Rs.120/-?
5. Suppose there is a price support system that purchase excess supply by the government (intervention buying program).
  - a. What is the government expenditure to execute this program?
  - b. What is the consumer surplus after this program?
  - c. What is the producer surplus after this program?
  - d. What is the dead weight loss of this program?
6. Suppose government implements a guaranteed price at Rs. ~~18~~<sup>120</sup> and execute deficiency payment system instead of intervention buying program.
  - a. What is the new market price after the deficiency payment system?
  - b. What is the deficiency payment per unit?

- c. What is the total deficiency payment of the government?
- d. What is the consumer surplus after the deficiency payment system?
- e. What is the producer surplus after the deficiency payment system?
- f. What is the dead weight loss of this deficiency payment system?

### **Exercise 04**

Following equations shows demand and supply of a hypothetical market.

$$Q_d = 30 - 2p$$

$$Q_s = -2 + 2p$$

1. Calculate equilibrium price and quantity.
2. Show equilibrium price and quantity in a diagram.
3. If government impose a price floor of Rs.12/- show it in the diagram.
4. What is the excess supply at price floor of Rs.12/-?
5. Suppose there is a price support system that purchase excess supply by the government (intervention buying program).
  - a. What is the government expenditure to execute this program?
  - b. What is the consumer surplus after this program?
  - c. What is the producer surplus after this program?
  - d. What is the dead weight loss of this program?
6. Suppose government implements a guaranteed price at Rs. 12 and execute deficiency payment system instead of intervention buying program.
  - a. What is the new market price after the deficiency payment system?
  - b. What is the deficiency payment per unit?
  - c. What is the total deficiency payment of the government?
  - d. What is the consumer surplus after the deficiency payment system?
  - e. What is the producer surplus after the deficiency payment system?
  - f. What is the dead weight loss of this deficiency payment system?