Q. 10. What is economic model? How does economic model construct? Explain briefly.

Or

Briefly discuss the role of market clearing condition in constructing market model.

Or

Discuss basic market models with their basic characteristics.

Or

Analyse the role of market forces for analysing equilibrium position.

Answer :

An economic model is an organized set of relationship which describes the functioning of an economic identity. In other words, a model is a set of economic relationships which is generally expressed through a set of mathematical equations. If in an economic model the set of equations are organised with respect to the market forces then it will become a market model. Each equation should involve different types of variables like price, demand, supply etc.

An economic model is mainly constructed with the help of three variables for a single commodity. These variables are considered as quantity demanded of the commodity (Q_d), quantity supplied (Q_s) and price of the commodity (P). On the basis of quantity demanded and price, the demand function can be constructed. As there exists inverse relationship between price and quantity demanded, therefore the demand function is identified as a decreasing function of price. Mathematically, it can be represented as

$$Q_d = a - bP \quad ; \; a, b > 0$$

where 'a' and 'b' are two parameters. In the equation, 'a' represents intercept of the demand function and 'b' represents the slope of the function.

On the other hand, on the basis of quantity supply and price, the supply function can be constructed. As there exists positive relationship between price and supply, therefore the supply function is identified as a positive function of price. Thus, the supply function can be written as

$$Q_s = -c + dP \quad ; \; c, d > 0$$

Where, 'c' and 'd' are two parameters. In the function 'c' represents the intersect of the function and 'd' represents slope of the function.

Again for constructing market model, there must be market clearing condition. This condition implies that in the market there exists perfect equality between demand and supply. Thus the complete market model can be presented as

$Q_d = a - bP$ (demand function)

$Q_s = -c + dP$ (supply function)

$Q_d = Q_s$ (market clearing condition)

The complete market model can be shown with the help of following figure 1.7

In the diagram, DD demand curve and SS supply curve which interest one another at point E and hence E is the market clearing situation. Consequently equilibrium price and quantity are OP and OQ respectively. Any, deviation from OP can not

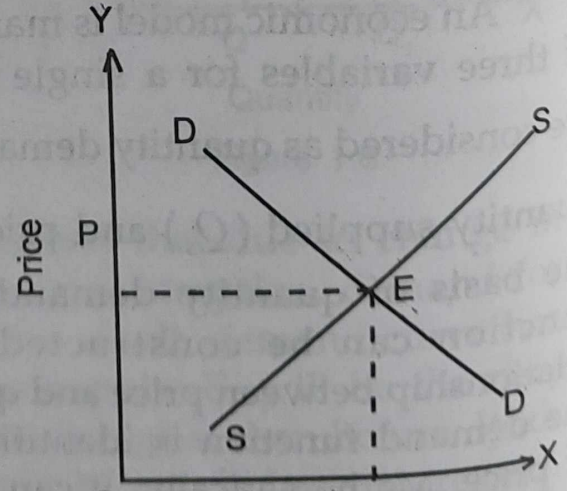

Figure 1.7

represent equilibrium. If price is below OP then due to excess demand, it increases to OP. But if price is above OP, due to excess supply, it comes down to OP. In this way, market model explains the role of demand and supply in a free working economy.