

## UNIT 3 : SUPPLY

### LEARNING OUTCOMES

At the end of this Unit, you should be able to:

- ♦ Explain the meaning of supply.
- ♦ List and provide specific examples of determinants of supply.
- ♦ Describe the law of supply.
- ♦ Describe the difference between movements on the supply curve and shift of the supply curve.
- ♦ Explain the concept of elasticity of supply with examples.
- ♦ Illustrate how the concepts of demand and supply can be used to determine price.

### 3.0 INTRODUCTION

In a market economy, sellers for products and services constitute the supply side. As the term 'demand' refers to the quantity of a good or service that the consumers are willing and able to purchase at various prices during a given period of time, the term 'supply' refers to the amount of a good or service that the producers are willing and able to offer to the market at various prices during a given period of time.

**Two important points apply to supply:**

- (i) Supply refers to what a firm offer for sale in the market, not necessarily to what they succeed in selling. What is offered may not get sold.
- (ii) Supply is a flow. The quantity supplied is 'so much' per unit of time, per day, per week, or per year.

### 3.1 DETERMINANTS OF SUPPLY

Although price is an important consideration in determining the willingness and desire to part with commodities, there are many other factors which determine the supply of a product or a service. These are discussed below:

- (i) **Price of the good:** Other things being equal, the higher the relative price of a good the greater the quantity of it that will be supplied. This is because goods and services are produced by the firm in order to earn profits and, *ceteris paribus*, profits rise if the price of its product rises.
- (ii) **Prices of related goods:** If the prices of other goods rise, they become relatively more profitable to the firm to produce and sell than the good in question. It implies that, if the price of Y rises, the quantity supplied of X will fall. For example, if price of wheat rises, the farmers may shift their land to wheat production away from corn and soya beans.
- (iii) **Prices of factors of production:** Cost of production is a significant factor that affects supply. A rise in the price of a particular factor of production will cause an increase in the cost of making those goods that use a great deal of that factor than in the costs of producing those that use relatively small amount of

the factor. For example, a rise in the cost of land will have a large effect on the cost of producing wheat and a very small effect on the cost of producing automobiles. Thus, a change in the price of one factor of production will cause changes in the relative profitability of different lines of production and will cause producers to shift from one line to another and thus supplies of different commodities will change.

- (iv) **State of technology:** The supply of a particular product depends upon the state of technology also. Inventions and innovations tend to make it possible to produce more or better goods with the same resources, and thus they tend to increase the quantity supplied of some products and to reduce the quantity supplied of products that are displaced. Availability of spare production capacity and the ease with which factor substitution can be made and the cost of such substitution also determine supply.
- (v) **Government Policy:** The production of a good may be subject to the imposition of commodity taxes such as excise duty, sales tax and import duties. These raise the cost of production and so the quantity supplied of a good would increase only when its price in the market rises. Subsidies, on the other hand, reduce the cost of production and thus provide an incentive to the firm to increase supply. When government imposes restrictions such as import quota on inputs, rationing of input supply etc, production tends to fall.
- (vi) **Nature of competition and size of industry:** Under competitive conditions, supply will be more than that under monopolized conditions. If there are large number of firms in the market, supply will be more. Besides, entry of new firms, either domestic or foreign, causes the industry supply curve to shift rightwards.

**Other Factors:** The quantity supplied of a good also depends upon government's industrial and foreign policies, goals of the firm, infrastructural facilities, natural factors such as weather, floods, earthquake and man-made factors such as war, labour strikes, communal riots and etc.

## 3.2 LAW OF SUPPLY

This refers to the relationship of quantity supplied of a good with one or more related variables which have an influence on the supply of the good. Normally, supply is related with price but it can be related with the type of technology used, scale of operations etc.

**The law of supply can be stated as: Other things remaining constant, the quantity of a good produced and offered for sale will increase as the price of the good rises and decrease as the price falls.**

This law is based upon common sense, because the higher the price of the good, the greater the profits that can be earned and thus greater the incentives to produce the good and offer it for sale. The law is known to be correct in a large number of cases. There is an exception however. If we take the supply of labour at very high wages, we may find that the supply of labour has decreased instead of increasing. Thus, the behaviour of supply depends upon the phenomenon considered and the degree of possible adjustment in supply.

The behaviour of supply is also affected by the time taken into consideration. In the short run, it may not be easy to increase supply, but in the long run supply can be easily adjusted in response to changes in price.

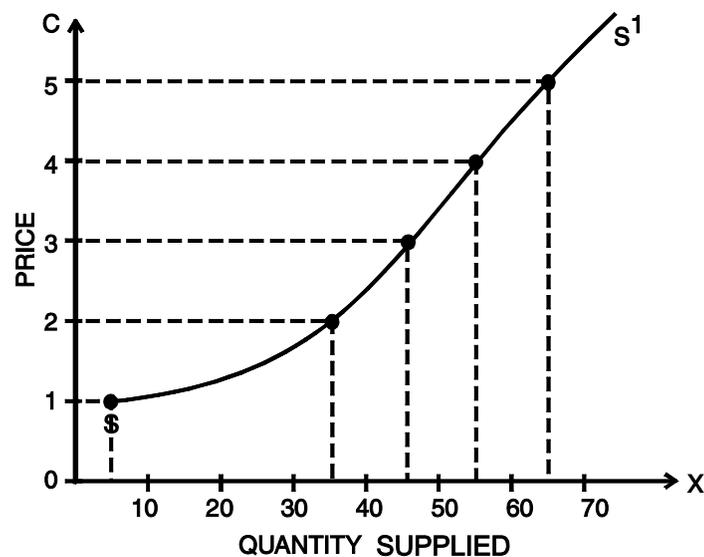
The law of supply can be explained through a supply schedule and a supply curve. A supply schedule is the tabular presentation of the law of supply. It shows the different prices of a commodity and the corresponding quantities that suppliers are willing to offer for sale. Consider the following hypothetical supply schedule of good X.

**Table 9 : Supply Schedule of Good 'X'**

Price (₹) (per kg)	Quantity supplied (kg)
1	5
2	35
3	45
4	55
5	65

The table shows the quantities of good X that would be produced and offered for sale at a number of alternative prices. At ₹ 1, for example, 5 kilograms of good X are offered for sale and at ₹ 3 per kg. 45 kg. would be forthcoming.

We can now plot the data from Table 9 on a graph. In Figure 19, price is plotted on the vertical axis and quantity on the horizontal axis, and various price-quantity combinations of the schedule 9 are plotted.

**Fig. 19 : Supply Curve**

When we draw a smooth curve through the plotted points, what we get is the supply curve for good X. The supply curve is a graphical presentation of the supply schedule. It shows the quantity of X that will be offered for sale at each price of X. It slopes upwards towards right (positive slope) showing that as price increases, the quantity supplied of X increases and vice-versa.

The market supply, like market demand, is the sum of supplies of a commodity made by all individual firms or their supply agencies. The market supply is governed by the law of supply. The market supply curve for 'X' can be obtained by adding horizontally the supply curves of various firms.

### 3.3 MOVEMENTS ON THE SUPPLY CURVE – INCREASE OR DECREASE IN THE QUANTITY SUPPLIED

When the supply of a good increase as a result of an increase in its price, we say that there is an increase in the quantity supplied and there is an upward movement on the supply curve. The reverse is the case when there is a fall in the price of the good. (See Figure 21)

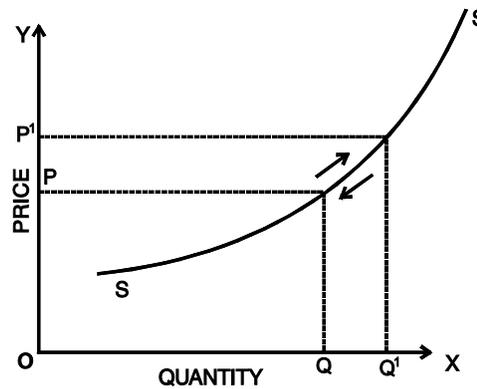


Fig. 20: Figure showing change in quantity supplied as a result of a price change

### 3.4 SHIFTS IN SUPPLY CURVE – INCREASE OR DECREASE IN SUPPLY

When the supply curve bodily shifts towards the right as a result of a change in one of the factors that influence the quantity supplied other than the commodity's own price, we say there is an increase in supply. When these factors cause the supply curve to shift to the left, we call it decrease in supply [See Figures 21(i) and (ii)].

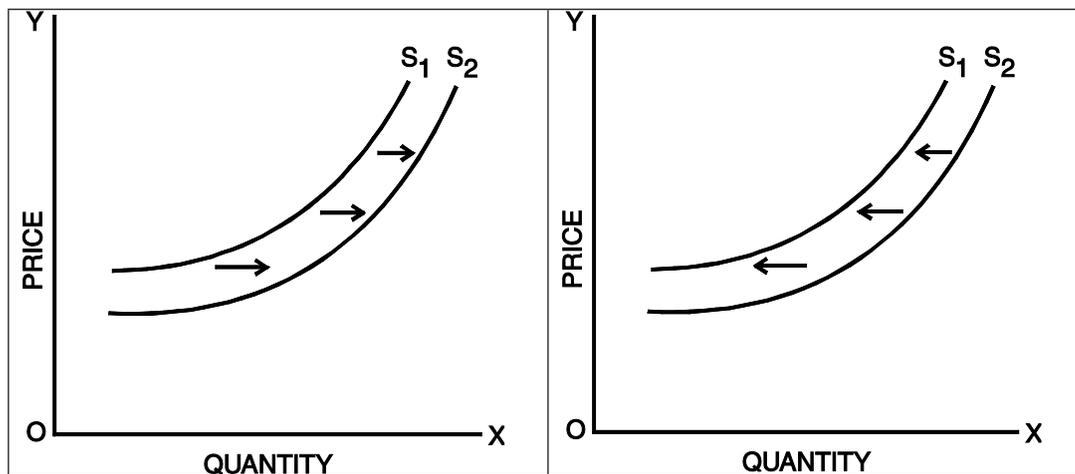


Fig. 21 : Shifts in supply curves

### 3.5 ELASTICITY OF SUPPLY

The elasticity of supply is defined as the responsiveness of the quantity supplied of a good to a change in its price. Elasticity of supply is measured by dividing the percentage change in quantity supplied of a good by the percentage change in its price i.e.,

$$E_s = \frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in Price}}$$

$$\text{Or } \frac{\frac{\text{Change in quantity supplied}}{\text{quantity supplied}}}{\frac{\text{Change in price}}{\text{price}}} \quad \text{or} \quad \frac{\frac{\Delta q}{q}}{\frac{\Delta p}{p}} = \frac{\Delta q}{\Delta p} \times \frac{p}{q}$$

Where  $q$  denotes original quantity supplied.

$\Delta q$  denotes change in quantity supplied.

$p$  denotes original price.

$\Delta p$  denotes change in price.

### Example:

- a) Suppose the price of commodity X increases from ₹ 2,000 per unit to ₹ 2,100 per unit and consequently the quantity supplied rises from 2,500 units to 3,000 units. Calculate the elasticity of supply.

$$\begin{aligned} \text{Here } \Delta q &= 500 \text{ units} & \Delta p &= ₹ 100 \\ p &= ₹ 2000 & q &= 2500 \text{ units} \end{aligned}$$

$$\therefore E_s = \frac{500}{100} \times \frac{2000}{2500} = 4$$

Elasticity of Supply = 4.

### 3.5.0 Type of Supply Elasticity

The elasticity of supply can be classified as under:

- (i) **Perfectly inelastic supply:** If as a result of a change in price, the quantity supplied of a good remains unchanged, we say that the elasticity of supply is zero or the good has perfectly inelastic supply. The vertical supply curve in Figure 22 shows that irrespective of price change, the quantity supplied remains unchanged.

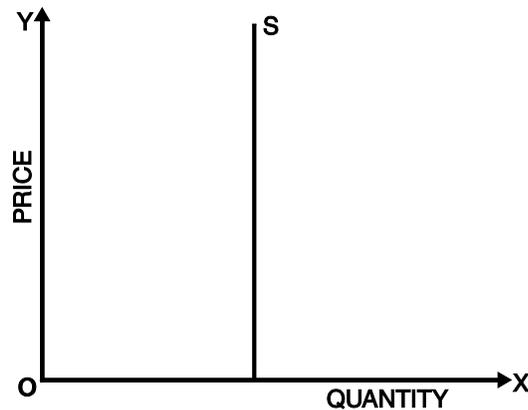
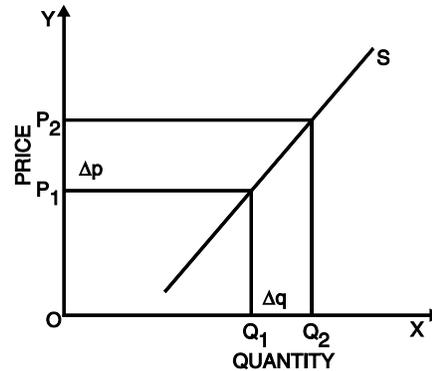


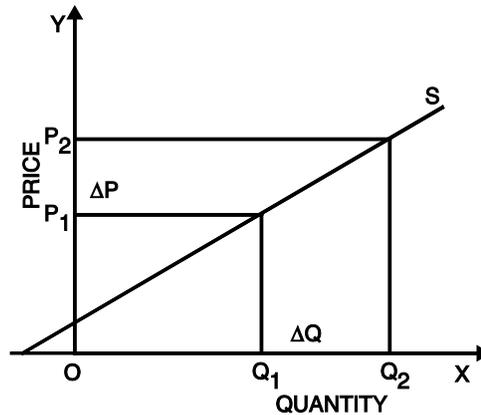
Fig. 22 : Supply curves of zero elasticity

- (ii) **Relatively less-elastic supply:** If as a result of a change in the price of a good its supply changes less than proportionately, we say that the supply of the good is relatively less elastic or elasticity of supply is less than one. Figure 23 shows that the relative change in the quantity supplied ( $\Delta q$ ) is less than the relative change in the price ( $\Delta p$ ).



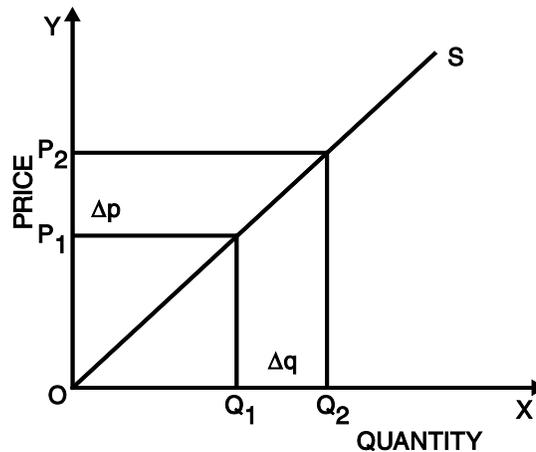
**Fig. 23 : Showing relatively less elastic supply**

- (iii) **Relatively greater-elastic supply:** If elasticity of supply is greater than one i.e., when the quantity supplied of a good changes substantially in response to a small change in the price of the good we say that supply is relatively elastic. Figure 24, shows that the relative change in the quantity supplied ( $\Delta q$ ) is greater than the relative change in the price.



**Fig. 24 : Showing relatively greater elastic supply**

- (iv) **Unit-elastic:** If the relative change in the quantity supplied is exactly equal to the relative change in the price, the supply is said to be unitary elastic. Here the coefficient of elasticity of supply is equal to one. In Figure 25, the relative change in the quantity supplied ( $\Delta q$ ) is equal to the relative change in the price ( $\Delta p$ ).



**Fig. 25 : Showing unitary elasticity**

- (v) **Perfectly elastic supply:** Elasticity of supply said to be infinite when nothing is supplied at a lower price, but a small increase in price causes supply to rise from zero to an infinitely large amount indicating that producers will supply any quantity demanded at that price. Figure 26 shows infinitely elastic supply.

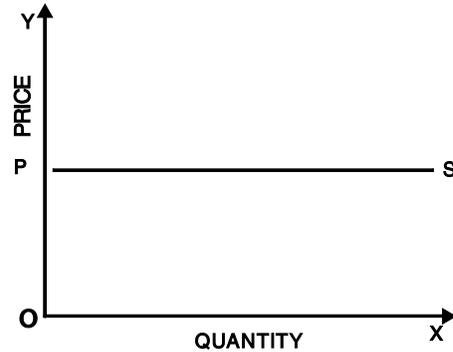


Fig. 26 : Supply curve of infinite elasticity

### 3.5.1 Measurement of supply-elasticity

The elasticity of supply can be considered with reference to a given point on the supply curve or between two points on the supply curve. When elasticity is measured at a given point on the supply curve, it is called point elasticity. Just as in demand, point-elasticity of supply can be measured with the help of the following formula:

$$E_s = \frac{dq}{dp} \times \frac{p}{q}$$

Qus: The Supply function is given as  $q = -100 + 10p$ . Find the elasticity of supply using point method, when price is ₹ 15.

$$E_s = \frac{dq}{dp} \times \frac{p}{q}$$

$$\text{Since } \frac{dq}{dp} = 10, p = ₹ 15, q = -100 + 10(15)$$

$$q = 50$$

$$\therefore E_s = 10 \times \frac{15}{50}$$

$$\text{or } E_s = 3$$

Where  $\frac{dq}{dp}$  is differentiation of the supply function with respect to price and p and q refer to price and quantity respectively.

**Arc-Elasticity:** Arc-elasticity i.e. elasticity of supply between two prices can be found out with the help of the following formula:

$$E_s = \frac{q_1 - q_2}{q_1 + q_2} \div \frac{p_1 - p_2}{p_1 + p_2}$$

or

$$E_s = \frac{q_1 - q_2}{q_1 + q_2} \times \frac{p_1 + p_2}{p_1 - p_2}$$

Where  $p_1, q_1$  are original price and quantity and  $p_2, q_2$  are new price and quantity supplied.

Thus, if we have to find elasticity of supply when  $p_1 = ₹ 12, p_2 = ₹ 15, q_1 = 20$  units and  $q_2 = 50$  units.

Then using the above formula, we will get supply elasticity as:

$$E_s = \frac{20 - 50}{20 + 50} \times \frac{12 + 15}{12 - 15}$$

$$\frac{30}{70} \times \frac{27}{3} = +3.85$$

### Equilibrium Price

Equilibrium refers to a market situation where quantity demanded is equal to quantity supplied. The intersection of demand and supply determines the equilibrium price. At this price the amount that the buyers want to buy is equal to the amount that sellers want to sell. Only at the equilibrium price, both the buyers and sellers are satisfied. Equilibrium price is also called market clearing price.

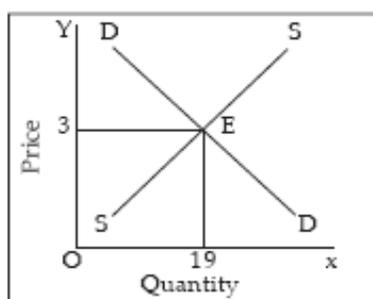
The determination of market price is the central theme of micro economic analysis. Hence, micro-economic theory is also called price theory.

The following table explains the equilibrium price

**Table 10 : Supply and Demand Schedule**

Price (₹)	Quantity Demanded	Quantity Supplied	Impact on price
5	6	31	Downward
4	12	25	Downward
3	19	19	Equilibrium
2	25	12	Upward
1	31	6	Upward

The equilibrium between demand and supply is depicted in the diagram below. Demand and supply are in equilibrium at point E where the two curves intersect each other. It means that only at price ₹ 3 the quantity demanded is equal to the quantity supplied. The equilibrium quantity is 19 units and these are exchanged at price ₹ 3. If the price is more than the equilibrium level, excess supply will push the price downwards as there are few takers in the market at this price. For example, in Table 10, if price is say ₹ 5, quantity demanded is 6 units which is quite less than the quantity supplied (31 units). There will be excess supply in the market which will force the sellers to reduce price if they want to sell off their product. Hence the price will fall and continue falling down till the level where quantity demanded becomes equal to the quantity supplied. Opposite will happen when quantity demanded is more than quantity supplied at a particular price.



**Fig. 27 : Equilibrium Price**

The equilibrium price is determined by the intersection between demand and supply. It is also called the market equilibrium.



## SUMMARY

- ◆ 'Supply' refers to the amount of a good or service that the producers are willing and able to offer to the market at various prices during a given period of time.
- ◆ The determinants of supply other than its own price are: prices of the related goods, prices of factors of production, state of technology, government policy and other factors.
- ◆ The law of supply states that when the price of the good rises, the corresponding quantity supplied increases and when the price reduces, the quantity supplied also reduces. There is a direct relationship between price and quantity supplied.
- ◆ The supply curve establishes the relationship between the amount of supply and the price. It is an upward sloping curve showing a positive relationship between price and quantity supplied.
- ◆ When the supply of a good increases as a result of an increase in its price we say that there is an increase in the quantity supplied and there is an upward movement on the supply curve. The reverse is the case when there is a fall in the price of the good.
- ◆ Elasticity of supply means the responsiveness of supply to change in the price of the commodity.
- ◆ The elasticity of supply can be classified in to perfectly inelastic supply, relatively less-elastic supply, relatively greater-elastic supply, unit-elastic and perfectly elastic supply.
- ◆ The measurement of supply-elasticity is of two types- point elasticity and arc-elasticity.
- ◆ Elasticity of supply can be considered with reference to a given point on the supply curve (point elasticity) or between two points on the supply curve (arc elasticity).
- ◆ Equilibrium price is one at which the wishes of both the buyers and the sellers are satisfied. At this price, the amount that buyers want to buy and sellers want to sell will be equal.



## MULTIPLE CHOICE QUESTIONS

1. Demand for a commodity refers to:
  - (a) desire backed by ability to pay for the commodity.
  - (b) need for the commodity and willingness to pay for it.
  - (c) the quantity demanded of that commodity at a certain price.
  - (d) the quantity of the commodity demanded at a certain price during any particular period of time.
2. Contraction of demand is the result of:
  - (a) decrease in the number of consumers.
  - (b) increase in the price of the good concerned.
  - (c) increase in the prices of other goods.
  - (d) decrease in the income of purchasers.

3. All but one of the following are assumed to remain the same while drawing an individual's demand curve for a commodity. Which one is it?
  - (a) The preference of the individual.
  - (b) His monetary income.
  - (c) Price of the commodity.
  - (d) Price of related goods.
4. Which of the following pairs of goods is an example of substitutes?
  - (a) Tea and sugar.
  - (b) Tea and coffee.
  - (c) Pen and ink.
  - (d) Shirt and trousers.
5. In the case of a straight line demand curve meeting the two axes, the price-elasticity of demand at the mid-point of the line would be:
  - (a) 0
  - (b) 1
  - (c) 1.5
  - (d) 2
6. The Law of Demand, assuming other things to remain constant, establishes the relationship between:
  - (a) income of the consumer and the quantity of a good demanded by him.
  - (b) price of a good and the quantity demanded.
  - (c) price of a good and the demand for its substitute.
  - (d) quantity demanded of a good and the relative prices of its complementary goods.
7. Identify the factor which generally keeps the price-elasticity of demand for a good low:
  - (a) Variety of uses for that good.
  - (b) very low price of a commodity.
  - (c) Close substitutes for that good.
  - (d) High proportion of the consumer's income spent on it.
8. Identify the coefficient of price-elasticity of demand when the percentage increase in the quantity of a good demanded is smaller than the percentage fall in its price:
  - (a) Equal to one.
  - (b) Greater than one.
  - (c) Smaller than one.
  - (d) Zero.
9. In the case of an inferior good, the income elasticity of demand is:
  - (a) positive.
  - (b) zero.
  - (c) negative.
  - (d) infinite.
10. If the demand for a good is inelastic, an increase in its price will cause the total expenditure of the consumers of the good to:
  - (a) remain the same.
  - (b) increase.
  - (c) decrease.
  - (d) any of these.

11. If regardless of changes in its price, the quantity demanded of a good remains unchanged, then the demand curve for the good will be:
- (a) horizontal. (b) vertical.  
(c) positively sloped. (d) negatively sloped.
12. Suppose the price of Pepsi increases, we will expect the demand curve of Coca Cola to:
- (a) shift towards left since these are substitutes.  
(b) shift towards right since these are substitutes.  
(c) remain at the same level.  
(d) None of the above.
13. All of the following are determinants of demand except:
- (a) tastes and preferences. (b) quantity supplied.  
(c) income of the consumer. (d) price of related goods.
14. A movement along the demand curve for soft drinks is best described as :
- (a) An increase in demand. (b) A decrease in demand.  
(c) A change in quantity demanded. (d) A change in demand.
15. If the price of Pepsi decreases relative to the price of Coke and 7-UP, the demand for :
- (a) Coke will decrease. (b) 7-Up will decrease.  
(c) Coke and 7-UP will increase. (d) Coke and 7-Up will decrease.
16. If a good is a luxury, its income elasticity of demand is:
- (a) positive and less than 1. (b) negative but greater than -1.  
(c) positive and greater than 1. (d) zero.
17. The price of hot dogs increases by 22% and the quantity of hot dogs demanded falls by 25%. This indicates that demand for hot dogs is:
- (a) elastic. (b) inelastic.  
(c) unitarily elastic. (d) perfectly elastic.
18. If the quantity demanded of mutton increases by 5% when the price of chicken increases by 20%, the cross-price elasticity of demand between mutton and chicken is:
- (a) -0.25 (b) 0.25  
(c) -4 (d) 4
19. Given the following four possibilities, which one results in an increase in total consumer expenditure?
- (a) demand is unitary elastic and price falls.  
(b) demand is elastic and price rises.  
(c) demand is inelastic and price falls.  
(d) demand is inelastic and prices rises.

20. Which of the following statements about price elasticity of supply is correct?
- a) Price elasticity of supply is a measure of how much the quantity supplied of a good responds to a change in the price of that good.
  - b) Price elasticity of supply is computed as the percentage change in quantity supplied divided by the percentage change in price.
  - c) Price elasticity of supply in the long run would be different from that of the short run.
  - d) All the above.
21. Which of the following is an incorrect statement?
- a) When goods are substitutes, a fall in the price of one (*ceteris paribus*) leads to a fall in the quantity demanded of its substitutes.
  - b) When commodities are complements, a fall in the price of one (other things being equal) will cause the demand of the other to rise.
  - c) As the income of the consumer increases, the demand for the commodity increases always and vice versa.
  - d) When a commodity becomes fashionable people prefer to buy it and therefore its demand increases.
22. Suppose the price of movies seen at a theatre rises from ₹ 120 per person to ₹ 200 per person. The theatre manager observes that the rise in price causes attendance at a given movie to fall from 300 persons to 200 persons. What is the price elasticity of demand for movies? (Use Arc Elasticity Method)
- (a) .5
  - (b) .8
  - (c) 1.0
  - (d) 1.2
23. Suppose a department store has a sale on its silverware. If the price of a plate-setting is reduced from ₹ 300 to ₹ 200 and the quantity demanded increases from 3,000 plate-settings to 5,000 plate-settings, what is the price elasticity of demand for silverware? (Use Arc Elasticity Method)
- (a) .8
  - (b) 1.0
  - (c) 1.25
  - (d) 1.50
24. When the numerical value of cross elasticity between two goods is very high, it means
- a) The goods are perfect complements and therefore have to be used together.
  - b) The goods are perfect substitutes and can be used with ease in place of one another.
  - c) There is a high degree of substitutability between the two goods.
  - d) The goods are neutral and therefore cannot be considered as substitutes.
25. If the local pizzeria raises the price of a medium pizza from ₹ 60 to ₹ 100 and quantity demanded falls from 700 pizzas a night to 100 pizzas a night, the price elasticity of demand for pizzas is: (Use Arc Elasticity Method)
- (a) .67
  - (b) 1.5
  - (c) 2.0
  - (d) 3.0

26. If electricity demand is inelastic, and electricity charges increase, which of the following is likely to occur?
- (a) Quantity demanded will fall by a relatively large amount.
  - (b) Quantity demanded will fall by a relatively small amount.
  - (c) Quantity demanded will rise in the short run, but fall in the long run.
  - (d) Quantity demanded will fall in the short run, but rise in the long run.
27. Suppose the demand for meals at a medium-priced restaurant is elastic. If the management of the restaurant is considering raising prices, it can expect a relatively:
- (a) large fall in quantity demanded.
  - (b) large fall in demand.
  - (c) small fall in quantity demanded.
  - (d) small fall in demand.
28. Point elasticity is useful for which of the following situations?
- (a) The bookstore is considering doubling the price of notebooks.
  - (b) A restaurant is considering lowering the price of its most expensive dishes by 50 percent.
  - (c) An auto producer is interested in determining the response of consumers to the price of cars being lowered by ₹ 100.
  - (d) None of the above.
29. A decrease in price will result in an increase in total revenue if :
- (a) the percentage change in quantity demanded is less than the percentage change in price.
  - (b) the percentage change in quantity demanded is greater than the percentage change in price.
  - (c) demand is inelastic.
  - (d) the consumer is operating along a linear demand curve at a point at which the price is very low and the quantity demanded is very high.
30. An increase in price will result in an increase in total revenue if :
- (a) the percentage change in quantity demanded is less than the percentage change in price.
  - (b) the percentage change in quantity demanded is greater than the percentage change in price.
  - (c) demand is elastic.
  - (d) the consumer is operating along a linear demand curve at a point at which the price is very high and the quantity demanded is very low.
31. Demand for a good will tend to be more elastic if it exhibits which of the following characteristics?
- (a) It represents a small part of the consumer's income.
  - (b) The good has many substitutes available.
  - (c) It is a necessity (as opposed to a luxury).
  - (d) There is little time for the consumer to adjust to the price change.

32. Demand for a good will tend to be more inelastic if it exhibits which of the following characteristics?
- (a) The good has many substitutes.
  - (b) The good is a luxury (as opposed to a necessity).
  - (c) The good is a small part of the consumer's income.
  - (d) There is a great deal of time for the consumer to adjust to the change in prices.
33. Suppose a consumer's income increases from ₹ 30,000 to ₹ 36,000. As a result, the consumer increases her purchases of compact discs (CDs) from 25 CDs to 30 CDs. What is the consumer's income elasticity of demand for CDs? (Use Arc Elasticity Method)
- (a) 0.5
  - (b) 1.0
  - (c) 1.5
  - (d) 2.0
34. Total utility is maximum when:
- (a) marginal utility is zero.
  - (b) marginal utility is at its highest point.
  - (c) marginal utility is negative.
  - (d) none of the above.
35. Which one is not an assumption of the theory of demand based on analysis of indifference curves?
- (a) Given scale of preferences as between different combinations of two goods.
  - (b) Diminishing marginal rate of substitution.
  - (c) Constant marginal utility of money.
  - (d) Consumers would always prefer more of a particular good to less of it, other things remaining the same.
36. The consumer is in equilibrium at a point where the budget line:
- (a) is above an indifference curve.
  - (b) is below an indifference curve.
  - (c) is tangent to an indifference curve.
  - (d) cuts an indifference curve.
37. An indifference curve slopes down towards right since more of one commodity and less of another result in:
- (a) same level of satisfaction.
  - (b) greater satisfaction.
  - (c) maximum satisfaction.
  - (d) any of the above.
38. Which of the following statements is incorrect?
- (a) An indifference curve must be downward-sloping to the right.
  - (b) Convexity of a curve implies that the slope of the curve diminishes as one moves from left to right.
  - (c) The income elasticity for inferior goods to a consumer is positive.
  - (d) The total effect of a change in the price of a good on its quantity demanded is called the price effect.

39. The second glass of lemonade gives lesser satisfaction to a thirsty boy. This is a clear case of
- (a) Law of demand. (b) Law of diminishing returns.  
(c) Law of diminishing utility. (d) Law of supply.
40. What will happen in the rice market if buyers are expecting higher rice prices in the near future?
- (a) The demand for rice will increase. (b) The demand for rice will decrease.  
(c) The demand for rice will be unaffected. (d) None of the above.
41. In the case of a Giffen good, the demand curve will be:
- (a) horizontal. (b) downward-sloping to the right.  
(c) vertical. (d) upward-sloping to the right.
42. By consumer surplus, economists mean
- (a) the area inside the budget line.  
(b) the area between the average revenue and marginal revenue curves.  
(c) the difference between the maximum amount a person is willing to pay for a good and its market price.  
(d) none of the above.
43. Which of the following is a property of an indifference curve?
- (a) it is convex to the origin.  
(b) the marginal rate of substitution is constant as you move along an indifference curve.  
(c) marginal utility is constant as you move along an indifference curve.  
(d) total utility is greatest where the 45 degree line cuts the indifference curve.
44. When economists speak of the utility of a certain good, they are referring to
- (a) the demand for the good.  
(b) the usefulness of the good in consumption.  
(c) the expected satisfaction derived from consuming the good.  
(d) the rate at which consumers are willing to exchange one good for another.
45. A vertical supply curve parallel to Y axis implies that the elasticity of supply is:
- (a) Zero. (b) Infinity.  
(c) Equal to one. (d) Greater than zero but less than infinity.
46. The supply of a good refers to:
- (a) actual production of the good. (b) total existing stock of the good.  
(c) stock available for sale.  
(d) amount of the good offered for sale at a particular price per unit of time.

47. An increase in the supply of a good is caused by:
- (a) improvements in its technology.
  - (b) fall in the prices of other goods.
  - (c) fall in the prices of factors of production.
  - (d) all of the above.
48. Elasticity of supply refers to the degree of responsiveness of supply of a good to changes in its:
- (a) demand.
  - (b) price.
  - (c) cost of production.
  - (d) state of technology.
49. A horizontal supply curve parallel to the quantity axis implies that the elasticity of supply is:
- (a) zero.
  - (b) infinite.
  - (c) equal to one.
  - (d) greater than zero but less than one.
50. Contraction of supply is the result of:
- (a) decrease in the number of producers.
  - (b) decrease in the price of the good concerned.
  - (c) increase in the prices of other goods.
  - (d) decrease in the outlay of sellers.
51. Conspicuous goods are also known as:
- (a) prestige goods.
  - (b) snob goods.
  - (c) veblen goods.
  - (d) all of the above.
52. The quantity purchased remains constant irrespective of the change in income. This is known as
- (a) negative income elasticity of demand.
  - (b) income elasticity of demand less than one.
  - (c) zero income elasticity of demand.
  - (d) income elasticity of demand is greater than one.
53. As income increases, the consumer will go in for superior goods and consequently the demand for inferior goods will fall. This means:
- (a) income elasticity of demand less than one.
  - (b) negative income elasticity of demand.
  - (c) zero income elasticity of demand.
  - (d) unitary income elasticity of demand.
54. When income increases the money spent on necessities of life may not increase in the same proportion, This means:
- (a) income elasticity of demand is zero.
  - (b) income elasticity of demand is one.
  - (c) income elasticity of demand is greater than one.
  - (d) income elasticity of demand is less than one.

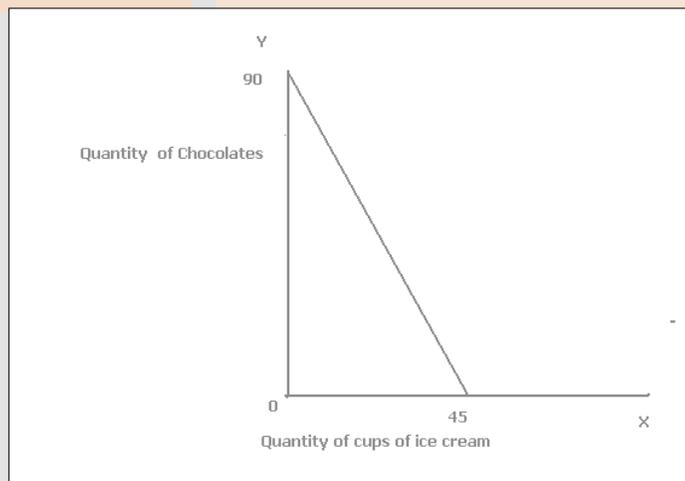
55. The luxury goods like jewellery and fancy articles will have
- (a) low income elasticity of demand                      (b) high income elasticity of demand  
(c) zero income elasticity of demand                      (d) none of the above
56. A good which cannot be consumed more than once is known as
- (a) durable good    (b) non-durable good  
(c) producer good    (d) none of the above
57. A relative price is
- (a) price expressed in terms of money                      (b) what you get paid for babysitting your cousin  
(c) the ratio of one money price to another                      (d) equal to a money price
58. A point below the budget line of a consumer
- (a) Represents a combination of goods which costs the whole of consumer's income.  
(b) Represents a combination of goods which costs less than the consumer's income.  
(c) Represents a combination of goods which is unattainable to the consumer given his/her money income.  
(d) Represents a combination of goods which costs more than the consumers' income.
59. Demand is the
- (a) the desire for a commodity given its price and those of related commodities.  
(b) the entire relationship between the quantity demanded and the price of a good other things remaining the same.  
(c) willingness to pay for a good if income is larger enough.  
(d) ability to pay for a good.
60. If, as people's income increases, the quantity demanded of a good decreases, the good is called
- (a) a substitute.    (b) a normal good.  
(c) an inferior good.    (d) a complement.
61. The price of tomatoes increases and people buy tomato puree. You infer that tomato puree and tomatoes are
- (a) normal goods.    (b) complements.  
(c) substitutes.    (d) inferior goods.
62. Chicken and fish are substitutes. If the price of chicken increases, the demand for fish will
- (a) increase or decrease but the demand curve for chicken will not change.  
(b) increase and the demand curve for fish will shift rightwards.  
(c) not change but there will be a movement along the demand curve for fish.  
(d) decrease and the demand curve for fish will shift leftwards.

63. Potato chips and popcorn are substitutes. A rise in the price of potato chips will \_\_\_\_\_ the demand for popcorn and the quantity of popcorn will \_\_\_\_\_
- (a) increase; increase (b) increase; decrease  
(c) decrease; decrease (d) decrease; increase
64. If the price of Orange Juice increases, the demand for Apple Juice will \_\_\_\_\_.
- (a) increase (b) decrease  
(c) remain the same. (d) become negative.
65. An increase in the demand for computers, other things remaining same, will:
- (a) Increase the number of computers bought.  
(b) Decrease the price but increase the number of computers bought.  
(c) Increase the price of computers.  
(d) Increase the price and number of computers bought.
66. When total demand for a commodity whose price has fallen increases, it is due to:
- (a) income effect. (b) substitution effect.  
(c) complementary effect. (d) price effect.
67. With a fall in the price of a commodity:
- (a) consumer's real income increases.  
(b) consumer's real income decreases.  
(c) there is no change in the real income of the consumer.  
(d) none of the above.
68. With an increase in the price of diamond, the quantity demanded also increases. This is because it is a:
- (a) substitute good. (b) complementary good.  
(c) conspicuous good. (d) none of the above.
69. An example of a good that exhibit direct price-demand relationship is
- (a) Giffen goods. (b) Complementary goods.  
(c) Substitute goods. (d) None of the above.
70. In Economics, when demand for a commodity increases with a fall in its price it is known as:
- (a) contraction of demand. (b) expansion of demand.  
(c) no change in demand. (d) none of the above.
71. The quantity supplied of a good or service is the amount that
- (a) is actually bought during a given time period at a given price.  
(b) producers wish they could sell at a higher price.

- (c) producers plan to sell during a given time period at a given price.  
(d) people are willing to buy during a given time period at a given price.
72. Supply is the
- (a) limited resources that are available with the seller.  
(b) cost of producing a good.  
(c) entire relationship between the quantity supplied and the price of good.  
(d) Willingness to produce a good if the technology to produce it becomes available.
73. In the book market, the supply of books will decrease if any of the following occurs except
- (a) a decrease in the number of book publishers.  
(b) a decrease in the price of the book.  
(c) an increase in the future expected price of the book.  
(d) an increase in the price of paper used.
74. If price of computers increases by 10% and supply increases by 25%. The elasticity of supply is :
- (a) 2.5 (b) 0.4  
(c) (-) 2.5 (d) (-) 0.4
75. An increase in the number of sellers of bikes will increase the
- (a) the price of a bike. (b) demand for bikes.  
(c) the supply of bikes. (d) demand for helmets.
76. If the supply of bottled water decreases, other things remaining the same, the equilibrium price \_\_\_\_\_ and the equilibrium quantity \_\_\_\_\_
- (a) increases; decreases. (b) decreases; increases.  
(c) decreases; decreases. (d) increases; increases.
77. A decrease in the demand for cameras, other things remaining the same will.
- (a) increase the number of cameras bought.  
(b) decrease the price but increase the number of cameras bought.  
(c) increase the price of cameras.  
(d) decrease the price and decrease in the number of cameras bought.
78. If good growing conditions increases the supply of strawberries and hot weather increases the demand for strawberries, the quantity of strawberries bought
- (a) increases and the price might rise, fall or not change.  
(b) does not change but the price rises.  
(c) does not change but the price falls.  
(d) increases and the price rises.

79. Comforts lies between
- (a) inferior goods and necessities.
  - (b) luxuries and inferior goods.
  - (c) necessities and luxuries.
  - (d) none of the above.
80. In a very short period, the supply
- (a) can be changed.
  - (b) can not be changed.
  - (c) can be increased.
  - (d) none of the above.
81. When supply curve moves to the left, it means
- (a) Smaller supply at a given price.
  - (b) larger supply at a given price.
  - (c) constant supply at a lower price.
  - (d) none of the above.
82. When supply curve moves to right, it means
- (a) supply increases.
  - (b) supply decreases.
  - (c) supply remains constant.
  - (d) none of the above.
83. The elasticity of supply is defined as the
- (a) responsiveness of the quantity supplied of a good to a change in its price.
  - (b) responsiveness of the quantity supplied of a good without change in its price.
  - (c) responsiveness of the quantity demanded of a good to a change in its price.
  - (d) responsiveness of the quantity demanded of a good without change in its price.
84. Elasticity of supply is measured by dividing the percentage change in quantity supplied of a good by \_\_\_\_\_
- (a) Percentage change in income.
  - (b) Percentage change in quantity demanded of goods.
  - (c) Percentage change in price.
  - (d) Percentage change in taste and preference.
85. Elasticity of supply is zero means
- (a) perfectly inelastic supply.
  - (b) perfectly elastic supply.
  - (c) imperfectly elastic supply.
  - (d) none of the above.
86. Elasticity of supply is greater than one when
- (a) proportionate change in quantity supplied is more than the proportionate change in price.
  - (b) proportionate change in price is greater than the proportionate change in quantity supplied.
  - (c) change in price and quantity supplied are equal.
  - (d) None of the above.

87. If the quantity supplied is exactly equal to the relative change in price then the elasticity of supply is
- (a) less than one. (b) greater than one.  
(c) one. (d) none of the above.
88. The price of a commodity decreases from ₹ 6 to ₹ 4 and the quantity demanded of the good increases from 10 units to 15 units, find the coefficient of price elasticity. (Use Point Elasticity Method)
- (a) 1.5 (b) 2.5  
(c) -1.5 (d) 0.5
89. The supply function is given as  $Q = -100 + 10P$ . Find the elasticity using point method, when price is ₹ 15.
- (a) 4 (b) -3  
(c) -5 (d) 3
90. The figure below shows the budget constraint of a consumer with an income of ₹ 900/- to spend on two commodities, namely ice cream and chocolates.



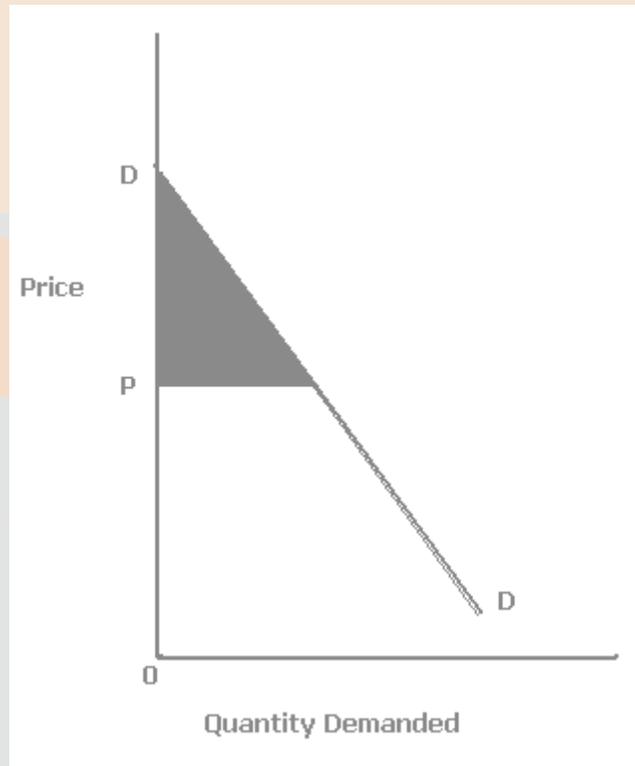
- The prices of these two commodities respectively are:
- (a) ₹ 10 and ₹ 20  
(b) ₹ 20 and ₹ 10  
(c) ₹ 10 and ₹ 5  
(d) Any of the above.
91. Which of the following statements about price elasticity of demand is correct?
- (a) Price elasticity of demand is a measure of how much the quantity demanded of a good responds to a change in the price of that good.  
(b) Price elasticity of demand is computed as the percentage change in quantity demanded divided by the percentage change in price.  
(c) Price elasticity of demand in the long run would be different from that of the short run.  
(d) All the above.

92. The aim of the consumer in allocating his income is to \_\_\_\_\_.
- (a) maximize his total utility.
  - (b) maximize his marginal utility.
  - (c) to buy the goods he wants most whatever the price.
  - (d) to buy the goods which he expects to be short in supply.
93. At higher prices people demand more of certain goods not for their worth but for their prestige value – This is called
- (a) veblen effect.
  - (b) giffens paradox.
  - (c) speculative effect.
  - (d) none of the above.
94. If the price of air-conditioner increases from ₹ 30,000 to ₹ 30,010 and resultant change in demand is negligible, we use the measure of \_\_\_\_\_ to measure elasticity.
- (a) point elasticity.
  - (b) perfect elasticity.
  - (c) perfect inelasticity.
  - (d) price elasticity.
95. If the percentage change in supply is less than the percentage change in price it is called
- (a) unit elasticity of supply.
  - (b) perfectly elastic.
  - (c) more elastic supply.
  - (d) inelastic supply.
96. The supply curve shifts to the right because of \_\_\_\_\_
- (a) improved technology.
  - (b) increased price of factors of production.
  - (c) increased excise duty.
  - (d) all of the above.
97. Which of the following statements is correct?
- (a) When the price falls the quantity demanded falls.
  - (b) Seasonal changes do not affect the supply of a commodity.
  - (c) Taxes and subsidies do not influence the supply of the commodity.
  - (d) With lower cost, it is profitable to supply more of the commodity.
98. If the demand is more than supply, then the pressure on price will be
- (a) upward
  - (b) downward
  - (c) constant
  - (d) none of the above
99. The supply curve for perishable commodities is \_\_\_\_\_.
- (a) elastic
  - (b) inelastic
  - (c) perfectly elastic
  - (d) perfectly inelastic
100. Supply is a \_\_\_\_\_ concept.
- (a) stock
  - (b) flow and stock
  - (c) flow
  - (d) none of the above

101. The cross elasticity between Rye bread and Whole Wheat bread is expected to be:

- (a) positive
- (b) negative
- (c) zero
- (d) can't say

102. In the diagram given below, the shaded portion represents.



- (a) Price above which there is no demand for the commodity.
- (b) Monopoly price of the commodity.
- (c) Consumer surplus.
- (d) None of the above.

103. The income elasticity of tomatoes is 0.25, it means tomatoes are:

- (a) inferior goods.
- (b) luxury goods.
- (c) normal goods.
- (d) can't say.

104. The cross elasticity between personal computers and soft wares is:

- (a) positive.
- (b) negative.
- (c) zero.
- (d) one.

105. The cross elasticity between Bread and DVDs is:

- (a) positive.
- (b) negative.
- (c) zero.
- (d) one.

106. Which of the following statements is correct?

- (a) With the help of statistical tools, the demand can be forecasted accurately.
- (b) The more the number of substitutes of a commodity, more elastic is the demand.
- (c) Demand for butter is perfectly elastic.
- (d) Gold jewellery will have negative income elasticity.

107. Suppose the income elasticity of education in private school in India is 1.6. What does this indicate:

- (a) Private school education is a luxury.
- (b) Private school education is a necessity.
- (c) Private school education is an inferior commodity.
- (d) We should have more private schools.

108. Suppose potatoes have (-).0.4 as income elasticity. We can say from the data given that:

- (a) Potatoes are inferior goods.
- (b) Potatoes are superior goods.
- (c) Potatoes are necessities.
- (d) There is a need to increase the income of consumers so that they can purchase potatoes.

### ANSWERS

1.	d	2.	b	3.	c	4.	b	5.	b	6.	b
7.	b	8.	c	9.	c	10.	b	11.	b	12.	b
13.	b	14.	c	15.	d	16.	c	17.	a	18.	b
19.	d	20.	d	21.	c	22.	b	23.	c	24.	c
25.	d	26.	b	27.	a	28.	c	29.	b	30.	a
31.	b	32.	c	33.	b	34.	a	35.	c	36.	c
37.	a	38.	c	39.	c	40.	a	41.	d	42.	c
43.	a	44.	c	45.	a	46.	d	47.	d	48.	b
49.	b	50.	b	51.	d	52.	c	53.	b	54.	d
55.	b	56.	b	57.	c	58.	b	59.	b	60.	c
61.	c	62.	b	63.	a	64.	a	65.	d	66.	d
67.	a	68.	c	69.	a	70.	b	71.	c	72.	c
73.	b	74.	a	75.	c	76.	a	77.	d	78.	a
79.	c	80.	b	81.	a	82.	a	83.	a	84.	c
85.	a	86.	a	87.	c	88.	c	89.	d	90.	b
91.	d	92.	a	93.	a	94.	a	95.	d	96.	a
97.	d	98.	a	99.	d	100.	c	101.	a	102.	c
103.	c	104.	b	105.	c	106.	b	107.	a	108.	a