CHAPTER 4

Price Determination in Different Markets

Unit - 3 : (Price – Output Determination under different market forms)

A. Perfectly Competitive Market

Step – 1: Features of perfectly Competitive market:
(1) Large number of buyers & sellers.
(2) Product is homogeneous in nature.
(3) Firm is a price taker.
(4) Free entry & exit.
   (1+2+3+4) = Pure Competition.
(5) Knowledgable buyers & sellers
(6) Perfect mobility of factors.
(7) Absence of transport & selling cost.

Pure competition + (5),(6) & (7) = Perfect Competition.
Perfect Competition comprises Pure Competition & features (5),(6),&(7)

Step – 2: Price Determination under industry
Industry implies combination of individual firms. Each unit of firms produces homogenous product. Summation of product produced by all firms gives us industry output. Industry determines the price by equating industry demand & supply. When industry is in equilibrium each firm accepts the price as it is said to be in equilibrium since it has no incentive to expand or contract production. So under competitive conditions, the equilibrium price is determined, for a given product by the intersection of demand curve & supply curve of the same. In figure, ‘e’ is the equilibrium point as even if deviations take place from this point automatic market forces bring the situation back its original point, ‘OP_e’ is the equilibrium price & ‘OQ_e’ is equilibrium quantity.

Step – 3: Profit maximization condition of perfectly Competitive firm:
PRICE DETERMINATION:- (Industry is price maker and firm is price taker)
(1) Under perfect competition, the industry will decide the price at the equilibrium point where market demand is equal to market supply and each firm will accept the price decided by the industry. So we can say that industry is price maker and firm is price taker.

Industry – Price Maker
<table>
<thead>
<tr>
<th>Price</th>
<th>Demand (Units)</th>
<th>Supply (Units)</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50</td>
<td>10</td>
<td>Excess Demand</td>
</tr>
<tr>
<td>2</td>
<td>40</td>
<td>20</td>
<td>Excess Demand</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>30</td>
<td>$P = 3 = D=S$</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>40</td>
<td>Excess Supply</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

Equilibrium price for the industry fixed through the interaction of the demand and supply i.e. ₹ 3 per unit.

**Firm – Price Taker**

<table>
<thead>
<tr>
<th>Price (p)</th>
<th>Quantity Sold (Q)</th>
<th>Supply (Units)</th>
<th>Average Revenue $\frac{TR}{Q}$</th>
<th>Marginal Revenue $\frac{\Delta TR}{\Delta Q}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>9</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>12</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>15</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

It is clear from the above table and figure that in a perfectly competitive market a firm’s AR = MR = PRICE = DD and the AR curve is also known as demand curve (DD). In the above figure it is also clear that industry demand curve is negative sloped and Firm’s demand curve is horizontal line.

**PRICE AND OUTPUT DETERMINATION / EQUILIBRIUM OF THE FIRM**:

Under perfect competition a firm faces horizontal demand curve or AR curve (perfectly elastic demand curve). Since perfectly competitive firm sells additional units of output at the same
price, MR curve coincides with AR curve. MC curve is U shaped. Now in order to be in equilibrium, the firm will compare MC with MR. It will be in equilibrium at the level of output at which it is earning maximum profits or incurring minimum losses.

It can attain equilibrium only when conditions are satisfied:

(i) The Marginal Cost should be equal to the Marginal Revenue i.e. \( MC = MR \)
(ii) Its MC curve must cut its MR curve from below i.e. its MC curve must be rising at the point of equilibrium.

One additional condition also must be satisfied in case of loss that \( P < AVC \). If MR is greater than MC, there is always an incentive for the firm to expand its production further and gain by sale of additional units. If MR is less than MC, the firm will have reduce output since additional units adds more to cost than to revenue. Profits are maximum only at the point where \( MR = MC \).

Consider figure given above, in which DD and SS are the industry demand and supply curves which equilibrate at \( E \) to set the market price as \( OP \). The firm of perfectly competitive industry adopts \( OP \) price as given and considers \( P \)-line as demand (AR) curve, which is perfectly elastic at \( P \). As all the units are prices to at the same level, MR is a horizontal line equal to AR line. Note that MC curve cuts MR curve at two places \( T \) and \( E \) respectively. But \( T \) cannot be the position of equilibrium. The firm will be in equilibrium at \( E \) since at \( E \), MC curve is cutting the MR curve from below.

**Step – 4 : Different short run equilibrium of perfectly competitive firm**

In short run some factors are fixed in nature & firm increases output by employing more variable factors.

((a) Perfectly competitive firm may enjoy super-normal profit: In fig 1a, industry determines the price & each firm has to accept the determined price to find out its profit maximizing output. \( OP_1 \) is the price & by complying the conditions of equilibrium, the output is ‘\( OQ_1 \).’
TR = O\( P_1 e_1 Q_1 \), TC = O\( C_1 L_1 Q_1 \) 
\[ \therefore \text{Profit} = O\( P_1 e_1 Q_1 \) - O\( C_1 L_1 Q_1 \) = O\( C_1 P_1 e_1 L_1 \) \]  
[Shaded zone in Fig 1b] 
P > AC, P.Q > AC.Q, TR > TC, TR - TC > 0, Profit > 0, **Super - normal Profit**

**(b)** **Perfectly competitive firm may enjoy normal profit:** Due to change in overhead cost AC may increase or due to decrease in price by the industry super-normal profit can be decreased. There will be a situation where firm enjoys normal profit or firm breaks even. In this case, AR curve becomes tangent to AC. i.e P = min AC

P.Q = AC.Q, TR = TC, TR - TC = 0, Profit = 0

It is no profit & no loss **Situation is known as ‘Break – Even point’**.

**(c)** **Perfectly competitive firm incurs loss but continues production:** Normal profit is that part which is hidden in terms of fixed cost. And perfectly competitive firm continues production until P = min AVC

Here, P < AC > AVC 
\[ \therefore \text{P.Q.} < \text{AC.Q > AVC.Q} \] 
\[ \therefore \text{TR}<\text{TC > TVC} \] 
\( \therefore \text{\( \pi <0 \) but money earned is greater than minimum variable cost. So it sustains until P = min AVC.} \)

**AS a whole, we get five situations**

1. **(a)** P > min AC □ Super normal profit
2. **(b)** P = min AC □ Normal Profit or Break even point
3. **(c)** P < min AC > min AVC □ Loss but continues production
4. **(d)** P = min AVC □ Point of indifference
5. **(e)** P < min AVC ⇒ Shut down point

**Step – 5 : Short – run supply curve of perfectly competitive firm**

Short – run is a period where some factors are fixed & firm operates on the same capacity point.
P = min AVC is origin of supply. For P < min AVC, firm is not able to cover the minimum variable cost & then it will not continue production. Plotting different combinations of price & quantity supplied as P = min AVC & P > min AVC, A, B, C points are obtained, each shows one-to-one relationship between price & quantity supplied.

\[(a) \sum_{i=1}^{n} S_i = 0 \text{ for } P < \min AVC \quad (b) \sum_{i=1}^{n} S_i \geq 0 \text{ for } P < \min AVC\]

The short-run supply curve is identical to positive portion of SMC curve.

**Step – 6 : Long run equilibrium of perfectly competitive firm**

Long run is a period where all factors are variable in nature. Firm is able to change its existing capacity or plant size. If existing firm enjoys super-normal profit, attracted by this new firms take entry & industry supply keeps on increasing. Price decreases & this mechanism continues until super-normal profit is wiped out.

At price $= P_1$, perfectly competitive firm enjoys super-normal profit to the tune of $C_1 P_1 e_1 L_1$ as shown in fig 1b. Influenced by this, outsiders take entry. Industry supply curve shifts towards horizontal axis. This mechanism continues until $P = MR = AR = SAC = SMC = LMC = \text{Min LAC}$. So both industry as well as firm are in equilibrium in long run, where firm enjoys normal profits.

**Note : Perfect competition is a myth as:-**

(i) Practically price does not remain constant.
(ii) Perfect knowledge of the product or price is hardly found in the buyers & sellers.
(iii) Customers may develop an irrational preference about certain product & sellers which may curtail the perfect competition.
(iv) In real, free entry & exit are rarely found. Patents, huge investments, economies of large scale of production etc. bound the entry of new firms.
(v) Perfect mobility is also hardly found.
B. Monopoly Market

MONOPOLY MARKET

(A) MEANING OF MONOPOLY MARKET

Monopoly is a market situation in which there is single seller of a product, which has no close substitute; there are barriers to entry, e.g. Railways

Characteristics (features):

1. Single seller and Large numbers of Buyers: There is only one firm producing or supplying a product. This single firm constitutes the industry. There are so many buyers of the product.
2. Restrictions to entry: There are strong barriers to the entry of other firms in the market.
3. No close substitutes: A monopolist sells a product which has no close substitutes, there may be substitute of the products for example substitute of railways are buses and airlin but these are no close substitute.

4. Firm is also an industry: In monopoly there is only one firm, So firm is also an industry.

5. Price maker and price taker both are same: The firm himself determines the price of the commodity and firm is also an industry, So price taker and price taker both are same.

6. Demand curve of the firm and market both are same: Monopolist is only single seller of his product, so its demand curve is identical with the market demand curve.

7. Perfect immobility: Factors of production is perfectly immobile, because these factors are under single producer.
(B) SOURCES OF MONOPOLY POWER - Monopoly power may be created with the following sources keeping the factors of production immobile-

1. Legal prohibition
2. Patent, copyright and trademark
3. Govt, policies to restriction on entry
4. Control of the sources of supply by one firm

(C) MONOPOLIST REVENUE CURVE

(Relationship between TR, AR and MR under Monopoly)

A monopolist will start from charging the highest price and will go on reducing the price to increase more sales. Thus more of a commodity can be sold only by lowering its price. AR is the demand curve and it will slope downward to the right. MR curve will be also downward sloping to the right and MR curve will lie between AR and Y-axis because, the rate of decline of the MR is just double the rate of decline of the average revenue.

1. TR curve is inverse-U shaped
2. AR and MR are both negative sloped (straight line downward sloping).
3. AR cannot be negative, but MR can be zero or negative.

<table>
<thead>
<tr>
<th>PRICE</th>
<th>OUTPUT</th>
<th>TR</th>
<th>AR</th>
<th>MR</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>TR-increases</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>18</td>
<td>9</td>
<td>9</td>
<td>AR &gt; MR and both decreases</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>24</td>
<td>8</td>
<td>6</td>
<td>MR ~ 0, TR is maximum</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
<td>28</td>
<td>7</td>
<td>4</td>
<td>TR decreases, AR &gt; (-) MR</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>30</td>
<td>6</td>
<td>2</td>
<td></td>
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<tr>
<td>5</td>
<td>6</td>
<td>30</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>28</td>
<td>4</td>
<td>-2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>24</td>
<td>3</td>
<td>-4</td>
<td></td>
</tr>
</tbody>
</table>
In the above table and figure AR > MR and TR increases but when MR is zero then maximum and when MR become negative then TR decreases.

**D. MR, AR, TR and Elasticity of Demand:** - Relationship among MR, AR, TR and Elasticity of Demand is as under

\[ MR = AR \times \left( \frac{E-1}{E} \right) \quad \text{Where E Price Elasticity of demand (Ed)} \]

From the above formula we can calculate the MR, If we assumed AR = 5, then MR will calculated in three situations-

(a) If E = 1, \( MR = 5 \times \left( \frac{1-1}{1} \right) = 0 \) (zero)

(b) If E > 1, assumed E = 2; then \( MR = 5 \times \left( \frac{2 - 1}{2} \right) = +2.5 \) (positive)

(c) If E < 1, assumed E = 0.5; then \( MR = 5 \times \left( \frac{0.5 - 1}{0.5} \right) = -5 \) (negative) So we can concluded that

If E = 1, then MR = 0.

If E > 1, then MR will be positive.

If E < 1, then MR will be negative. In the figure AR is demand curve and under the point method (lower segment / upper segment), of price elasticity of demand (Ed) it is already explained that at the mid point of demand curve, 'Ed=1' and top point 'Ed ~ α' and lower point 'Ed = 0' and same has been shown in above figure. And at the same time MR curve is '0', positive and
negative respectively. TR is affected by this, because when 'Ed = 1', TR is maximum, and when Ed > 1, TR increasing when 'Ed <!', TR is decreasing.

EQUILIBRIUM OF THE MONOPOLY FIRM (OUTPUT AND PRICE DETERMINATION):

1. **Firm Equilibrium:** In case of monopoly, the price-output equilibrium is that level of price and output produced which gives maximum profit to the monopolist or which minimize losses. The price-output combination, which yields maximum or optimum profits to the monopolist, is determined at the point where two conditions are satisfied.
In the figure at point E, MC = MR, so equilibrium output is OQ and price is AQ or OP, so TR is OPAQ.

(a) MC - MR and
(b) MC cuts MR from below

And one additional condition must be satisfied in case of loss that P > AVC.

This is true for both the short-run and the long-run

2. **Short-run Equilibrium**: Under short-run when a firm is in equilibrium position then a monopoly firm may earn superprofits, normal profits and incurring losses depending upon its ATC conditions

(a) **Super profits**: To earn super profits AR > ATC. In the figure (a), the firm's output is OQ, for OQ output MC is equal to MR at the point E. The OQ can be sold at price OP (AQ). In equilibrium position, by fixing its price on OP and output OQ, the firm is making supernormal profits equal to the area PABC.

(b) **Losses**: When a monopoly firm will incur losses then AR < ATC. If the demand conditions relative to cost conditions are not favourable to the monopolist firm, it may earn losses also. Figure (b) depicts that firm is in equilibrium at output OQ and price OP and at the same time firm's demand curve and AR lies below the AC, so firm is rendering losses equal to PABC.
3. **Long run Equilibrium: Super profit (LAR > LAC):** Monopoly firm in the long run gets abnormal profits. It is so because the new firms are not allowed to enter the market. To earn super profit LAR > LAC. In figure (c), firm's equilibrium is attained at point E where the firm's LMC intersects MR.

At equilibrium price OP, the firm produces OQ output. Since at the output level OQ firm's AR is more than its LAC, it gets profit AB per unit, total profit being equal to the shaded area PABC.

Under long-run a monopoly firm can produce at optimal or sub-optimal level. In other words, it can produce at minimum LAC curve and also he can produce before or after the minimum LAC curve.
These ‘3’ situations can be shown by following figures

C. Monopolistically Competitive Market

Step – 1 : Concepts & features
The assumption of a homogeneous product & single product do not always fit the real world. Advertising & other selling activities, practices widely used by businessmen, could not be explained either by pure competition or by monopoly. Firms can charge different prices as per different cost which results in ‘imperfect competition’. The monopolistic competition is the important part of ‘imperfect competition’. The idea of monopolistic competition was popularized by Prof Edwin H. Chamberlin (1933) ‘The Theory of Monopolistic Competition’ : ‘A Reorientation of the Theory of value’.

The features of monopolistic competition are.
(1) There are large number of buyers & sellers
(2) Freedom of entry & exit
(3) The principal goal is to maximize profits.
(4) Firms also try to compete on the basis other than price ‘known as ‘non-price competition’ e.g. advertising, product development, after sales service, better distribution arrangement etc.

(5) The products sold by the sellers are differentiated, yet they are close substitutes. i.e., in a monopolistic competitive market, the products of different sellers are differentiated on the basis of brands. These brands are generally so much advertised that a consumer starts associating the brand with a particular manufacturer and type of brand loyalty is developed. Product differentiation gives rise to an element of monopoly to the producer over the competing product. As such, the producer of an individual brand can raise the price of his product knowing that he will not lose all the customers to other brands because of absence of perfect substitutability.

**Step – 2 : Short – run equilibrium of monopolistically competitive firm**

During short-run firm operates within the existing capacity. The objective is to maximize profit, which can be obtained at point ‘e’ where three conditions are complied with:

1. \( MC = MR \)
2. Slope of MC > Slope of MR
3. Perceived demand curve intersects Actual demand curve at equilibrium price \( (L_1) \)

In this figure we get ‘e’ as equilibrium point where the above three conditions are satisfied. The monopolistically competitive firm fixes equilibrium price \( OP_1 \) where the total revenue = \( \square OP_1 L_1 Q_1 \)

and total cost = \( \square OP_1 L_2 Q_1 \).

The total profit earned by monopolistically competitive firm is \( \square C_1 P_1 L_1 L_2 \).
During long run period, as per Prof Chamberlin, both ‘new entry’ & price competition’ take place. As a result, the same quantity would be available at a lower price. Thus the perceived demand curve shifts to the downward direction. If price competition continues, then a situation may arise when the perceived demand curve falls below the LAC (i.e. LAC>P), & each firm would incur loss. Hence, some loss making firms would leave the market & actual market-share of the remaining firms will rise. Hence, at a given price, the remaining firms begin to perceive that they can sell more than before. So, perceived demand curve would also shift upward. This mechanism would continue until equilibrium reaches at ‘e’ point where monopolistically competitive firm enjoys normal profit & the long-run equilibrium conditions are:

1. SMC = LMC = MR
2. Slope of SMC = Slope of LMC > Slope of MR
3. Perceived dd curve intersects actual dd curve at equilibrium price
4. Equilibrium is attained with excess capacity.

D. Oligopoly Market

(A) MEANING OF OLIGOPOLY MARKET

An oligopoly is a market in which there are few producers of a product. Oligopoly is an important form of imperfect competition. In other words, when there are few (two to ten) sellers in a market selling homogeneous or differentiated but close substitutes products, oligopoly is said to exist. Consider the example of cold drinks industry or automobile industry.
Types of Oligopoly:
1. Pure / Perfect oligopoly - deals in homogeneous products- Aluminum industry. Excess capacity minimum LAC output - Equilibrium output in the above diag. Excess capacity is QQ, because OQ. - OQ = QQ under monopolistic completion market.
2. Differentiated / imperfect oligopoly - deals in product differentiated
3. Open oligopoly - New firms can enter the market and compete with existing firms, Closed oligopoly - new entry is restricted
4. Collusive oligopoly - common understanding or collusion in fixing price and output, Competitive oligopoly - Lack of understanding and compete with each other
5. Partial oligopoly - when industry is dominated by one large firm i.e. price leader, Full oligopoly - absences of price leadership
6. Syndicated oligopoly - Firms sells their products through centralized syndicate/channel, Organized oligopoly - Firms organize into a central association for fixing price, output etc. like OPEC.

Characteristics:
1. Few sellers: Oligopoly often described as 'competition among the few'.
2. Interdependence: In oligopoly, when the number of competitors is few, any change in price, output, and advertising technique, by a firm will have a direct effect on the fortune of the rivals, who will then retaliate by changing their own prices, outputs or advertising techniques as the case may be. So, oligopoly firm must consider the market demand and the reactions of other firms in the industry to any major decision it takes.
3. Advertising and selling costs (Non price competition): There is a great importance of advertising and selling costs in an oligopoly market. It is to be noted that firms in such type of market should avoid price cutting and try to compete on non-price basis (advertisement basis) because if they start under-cutting one another a type of price-war will emerge which will drive a few of them out of the market as customers will try to buy from the seller selling at the cheapest price.
4. Group behaviour: There is no generally accepted theory of group behaviour. In the oligopoly, the members of a group agree to pull together in promotion of common interest or will they fight to promote their individual interests. Each oligopolist closely watches the business behaviour of the other oligopolists in the industry and then designs his moves on the basis of some assumptions of how they behave or are likely to behave.
5. Kinked demand curve / Indeterminateness of demand curve: Because of interdependence of the firms in oligopoly and because of inability of a particular firm to predict the behaviour of other firms, the demand curve facing an oligopolistic firm loses its definiteness and determinateness. The demand curve facing an oligopolist may have a ‘kink’ at the level of the prevailing price suggesting stickiness in the price level. The kink is formed at the prevailing price level at ‘K’ because the segment of the demand curve above the 'K' is highly elastic and the below the 'K' is inelastic. This difference in elasticities is due to the particular competitive reaction pattern. Each oligopolist believes that if it lowers their price below 'K', his competitors will follow him and will accordingly lower their prices, whereas if he raises the price above the 'K', his competitors will not follow his increase in price.
6. Price rigidity: Price rigidity is found in the oligopolist market because when an oligopolist lowers the price its competitors will feel that, if they do not follow the price cut their customers will run away and buy from the firm, which has lowered the price. Thus in order to maintain their customers they will also lower their prices. Thus the upper portion of the demand curve is price elastic. On the other hand, if a firm increases the price of its product there will be a substantial reduction in its sales because as a result of the rise in its price, its customers will withdraw from it and go to its competitors, which will welcome the customers and will gain in sales. These happy competitors will have, therefore, no motivation to match the price rise. The oligopolist who raises its price will lose a great deal and will, therefore, refrain from increasing price. This behaviour of oligopolists explains the inelastic lower portion of the demand curve. Each oligopolist will, thus, adhere to the prevailing price seeing no gain in changing it and a kink will be formed at the prevailing price i.e. OP = KQ.

7. Substantial barriers to entry: In oligopoly there is no free entry and no blocked entry, we can say that there is substantial barriers to the entry.

Why does MR discontinue its slope?

MR discontinues its slope due to change in elasticity

When
AR flatter (e > 1) (MR > 0)
AR steeper (e < 1) (MR < 0)
Multiple Choice Questions
Chapter- 4: (Price Determination in Different Markets)

Unit – I : Meaning & types of market
Unit – II : Determination of price
Unit – III : Price Out-put determination under different market forms

1. With ceteris paribus, income increases & the price of a factor of production also increases. Initial point is ‘1’
The new equilibrium is
(a) Point 9  (c) Point 2
(b) Point 5  (d) Point 3

2. The price of complement good ‘y’ declines & at the same time, there is a technological progress in the production of good x. The new equilibrium is :
(a) Point 4  (c) Point 8
(b) Point 5  (d) Point 7

3. Due to natural calamities production of good ‘x’ is affected.
The new equilibrium is :
(a) Point 6  (c) Point 7
(b) Point 3  (d) Point 8

4. Consumers expect that in near future price of good ‘x’ will increase. The new equilibrium is :
(a) Point 6  (c) Point 3
(b) Point 5  (d) Point 8

5. When the demand & supply function of a good are Qd = 100 – 3P & Qs = 2p – 20, the equilibrium output is
(a) 22 Units  (c) 28 Units
(b) 24 Units  (d) 30 Units

6. The demand & supply function of a good are Qd = 100 – 3P & Qs = 2p – 20. If the price is 20, there would be surplus (deficit) of
(a) 25 Units  (c) 30 Units
(b) 20 Units  (d) 35 Units

7. Demand & Supply function are Qd = 13500 – 500P Qs = 3000 + 200P The market clearing price
(a) 12  (c) 15
(b) 13  (d) 16

4.23
8. | Price per kg | 9 | 8 | 7 | 6 | 5 | 4 | 3 |
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</thead>
<tbody>
<tr>
<td>Quantity dd per week</td>
<td>30</td>
<td>35</td>
<td>41</td>
<td>45</td>
<td>49</td>
<td>53</td>
<td>57</td>
</tr>
<tr>
<td>Quantity ss per week</td>
<td>62</td>
<td>60</td>
<td>57</td>
<td>53</td>
<td>49</td>
<td>45</td>
<td>41</td>
</tr>
</tbody>
</table>

The market is in equilibrium with price as ______________.
(a) ₹ 7  (c) ₹ 9
(b) ₹ 5  (d) None

Consider the following figure as initial equilibrium point 1 for Perk Chocolate and
answer 9, 10, 11, 12 and 13.

9. Find out the new equilibrium if there is an increase in price of Dairy Milk Chocolate
(a) Point 3  (c) Point 4
(b) Point 5  (d) Point 2

10. Find out the new equilibrium if there is economic growth but cost of labour producing Perk also rises
(a) Point 3  (c) Point 2
(b) Point 9  (d) Point 6

11. Find out the new equilibrium if there is health scare about the effect of Chocolate
(a) Point 2  (c) Point 3
(b) Point 9  (d) Point 6

12. Find out the new equilibrium if there is new technology for producing Perk Chocololate
(a) Point 8  (c) Point 3
(b) Point 9  (d) Point 6

13. Find out the new equilibrium if there is an increase in productivity an at the same time price of 5 Star Chocolate falls :
(a) Point 2  (c) Point 3
(b) Point 9  (d) Point 6

14. Price is the value of good in terms of :
(a) Quality  (c) Substitutes value
(b) Money  (d) None of the above

15. When demand & supply both increase in a same proportion
(a) Equilibrium quantity remains unchanged  (c) Equilibrium price remains same
(b) Price slightly increases  (d) Quantity slightly decreases

16. When equilibrium of market takes place we get
(a) Excess demand > Excess supply  (c) Excess supply = Excess demand = one
(b) Excess supply = Excess demand = zero  (d) None
17. With a given supply curve, a decrease in demand causes:
   (a) An overall decrease in price but an increase in equilibrium quantity.
   (b) An overall increase in price but a decrease in equilibrium quantity.
   (c) An overall decrease in price & a decrease in equilibrium quantity
   (d) No change in overall price but a reduction in equilibrium quantity.

18. When consumer's incomes & the number of sellers in the market for good 'X' both decrease. Based upon this information it can be observed that equilibrium:
   (a) Price will increase but quantity remains same
   (b) Price will decrease & quantity increases
   (c) Quantity will increase & price remains same
   (d) Quantity will decrease & price increases

19. Consider supply of cameras increases due to an increase in foreign imports. Which of the following will most likely occur?
   (a) The equilibrium price of cameras will increase
   (b) The equilibrium quantity of cameras exchanged will decrease.
   (c) The equilibrium price of camera film will decrease.
   (d) The equilibrium quantity of camera film exchanged will increase.

20. Assume that in the market for good 'X' there is a simultaneous increase in demand & the quantity supplied. The result will be:
   (a) An increase in equilibrium price & quantity
   (b) A decrease in equilibrium price & quantity
   (c) A decrease in equilibrium price & increase in equilibrium quantity.
   (d) An increase in equilibrium quantity & uncertain effect on equilibrium price.

21. Consider the situation when technology for producing personal computers improves & at the same time, individuals discover new uses for personal computers so that there is greater utilization of personal computers. Which of the following will happen to equilibrium price & equilibrium quantity?
   (a) Price will increase, quantity cannot be determined.
   (b) Price will decrease, quantity cannot be determined.
   (c) Quantity will increase; price cannot be determined.
   (d) Quantity will decrease; price cannot be determined.

22. In book market, 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

23. 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

24. If the supply of bottled water decreases, the equilibrium price ____________ and the equilibrium quantity ____________
   (a) Increases, decreases       (b) Decreases, increases
   (c) Decreases, decreases      (d) Increases, increases
25. A decrease in the demand for cameras, other things remaining the same will
   (a) Increase the number of cameras bought
   (b) Decrease the price of cameras
   (c) Increases the price of cameras
   (d) Decrease the price and the number of cameras bought

26. 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) Doesn’t change but the price rises
   (c) Doesn’t change but the price falls
   (d) Increases and the price rises

27. In a very short period market;
   (a) The supply is fixed
   (b) The demand is fixed
   (c) Demand & supply are fixed
   (d) All of the above.

28. Time element was conceived by
   (a) Prof. Pigou
   (b) Prof. Adam Smith
   (c) Prof. Alferd Marshall
   (d) Prof. Robinson

29. The term ‘market’ refers to :
   (a) Place where buyer & seller bargain a product or service for a price.
   (b) Place where buyer does not bargain
   (c) Place where all products are produced
   (d) All

30. Generally, market for perishable like butter, fish, egg, vegetables etc. will have :
   (a) Regional market
   (b) Local market
   (c) National market
   (d) None

31. Durable goods & industrial items exist in :
   (a) Local market
   (b) Regional market
   (c) National market
   (d) Secular market

32. Secular period is also known as :
   (a) Very short period.
   (b) Short period
   (c) Very long period
   (d) Long Period

33. Stock exchange market is the example for :
   (a) Unregulated market
   (b) Regulated market
   (c) Spot market
   (d) None

34. The market for the ultimate consumers is known as :
   (a) Whole sale market
   (b) Regulated market
   (c) Unregulated market
   (d) Retail market

35. If price is forced to stay below equilibrium price :
   (a) Excess demand exists
   (b) Excess supply exists
   (c) Either a or b
   (d) Neither a nor b
36. Marginal revenue becomes zero when
   (a) Total revenue is minimum  (c) Average revenue is maximum
   (b) Price elasticity is less than one  (d) None

37. When firm is price taker, shape of TR is
   (a) Upward convex  (c) Upward linear from origin
   (b) Dome shaped  (d) None of these

38. When firm is price maker, shape of TR is
   (a) Upward convex  (c) Upward linear from origin
   (b) Dome shaped  (d) None of these

39. Given the relation MR = \( P(1 - 1/e^P) \), if \( e^P < 1 \) then
   (a) MR > 0
   (b) MR = 0
   (c) TR increases at decreasing rate
   (d) None

40. Marginal revenue is equal to
   (a) Change in price divided by the change in output.
   (b) Change in quantity divided by the change in price
   (c) Change in \( P \times Q \) due to one unit change in output
   (d) Price, but only if the firm is a price searcher.

41. Average curve is the:
   (a) Demand curve of firm
   (b) Supply curve of firm
   (c) both a & b
   (d) none of these

42. When firm accepts price from industry the shape of TR curve is
   (a) Dome shaped
   (b) Upward convex
   (c) Upward linear started from origin
   (d) None of these

43. Under imperfect competition MR Curve cuts the horizontal line between Y – axis & demand curve into
   (a) Two unequal parts
   (b) May be equal or unequal parts
   (c) Two equal parts
   (d) None

44. When industry determines price & firm accepts price, the slope of MR is:
   (a) Positive
   (b) Negative
   (c) Zero
   (d) None

45. Average revenue is the revenue earned
   (a) Per unit of input
   (b) Per unit of output
   (c) Different units of input
   (d) Different units of output  4.27
46. AR can be symbolically written as :
   (a) MR/Q
   (b) Price × Quantity
   (c) TR / Q
   (d) None

47. Find out MR for price Rs. 10 and Price elasticity of demand 0.2
   (a) -30
   (b) -40
   (c) 40
   (d) None of these

48. Find out price in imperfect competition when MR = 10 Price elasticity of demand 6
   (a) 6
   (b) 20
   (c) 12
   (d) None of these

49. AR is also known as
   (a) Price
   (b) Income
   (c) Revenue
   (d) None of the above

50. Marginal revenue can be defined as the change in total revenue resulting from the :
   (a) Purchase of an additional unit a commodity
   (b) Sales of an additional unit of a commodity
   (c) Sale of subsequent units of a product
   (d) None of the above

51. When e > 1 then MR is
   (a) zero
   (b) negative
   (c) positive
   (d) one

52. When e = 1 then MR is
   (a) Positive
   (b) Zero
   (c) One
   (d) Negative

53. When e < 1 then MR is
   (a) Negative
   (b) Zero
   (c) Positive
   (d) One
Questions of Perfect Competition:

54. Under Perfect Competition the number of firms.
   (a) Is large
   (b) Is limited
   (c) Is about 10
   (d) Are many but limited.

55. Firm under Perfect Competition in the short run can earn only:
   (a) Abnormal profit
   (b) Normal Profit
   (c) A loss
   (d) Any of the above

56. Only one price for identical goods at any one time is the essential condition:
   (a) Monopoly
   (b) Monopolistic Competition
   (c) Perfect Competition
   (d) Monopsony

57. Which of the following is not an essential condition of pure competition
   (a) Large number of buyers & sellers
   (b) Homogeneous product
   (c) Freedom of entry
   (d) Absents of transport cost

58. In the Perfect Competition, if a new firm enters the industry in the long run, the supply curve:
   (a) Shifts to the left
   (b) Turns upwards.
   (c) Turns downwards.
   (d) Shifts to the right.

59. In Perfect Competition, since the firm is a price taker, the ______ curve is straight line.
   (a) Marginal cost
   (b) Total cost
   (c) Total revenue
   (d) Average cost

60. In the Perfect Competition, when the marginal revenue & marginal cost are equal, profit is ________________.
   (a) Maximum
   (b) Average
   (c) Zero
   (d) Not possible

61. In Perfect Competition, a firm increases profit when ______________ exceeds the ______________.
   (a) Total cost, Total revenue
   (b) Marginal cost, Marginal revenue
   (c) Total revenue, Total fixed cost
   (d) Average revenue, Average cost

62. In the long run there is enough time for normal profits. This is because in the long run, all inputs are.
   (a) Identical
   (b) Homogeneous
   (c) Variable
   (d) Fixed

63. In a perfectly competitive market, in the long run, competitive prices equal the minimum possible ____________ cost of good.
   (a) Marginal
   (b) Variable
   (c) Total
   (d) Average

4.29
64. In a Perfect Competition, in the long run, when new firm enters the industry supply curve shifts to the right resulting in _______________.
   (a) Fall in price  (c) Reduction in supply
   (b) Rise in price  (d) No change in price

65. Which of the following is not a characteristic feature of Perfect Competition?
   (a) All the seller sells at same price
   (b) All the products are homogeneous
   (c) Customers have no bargaining power
   (d) Customers have no purchasing power.

66. In which of the following types of market structure, is it impossible for a seller to charge different prices for the same good?
   (a) Monopoly
   (b) Perfect Competition
   (c) Monopolistic Competition
   (d) Oligopoly

67. A Perfectly Competitive firm is operating at an output level where price is greater than marginal cost. Which of the following is/are true?
   (a) The firm should increase its output so as to maximize profit.
   (b) The firm should reduce its output so as to maximize profit.
   (c) The firm is neither making profit nor loss.
   (d) The firm is incurring loss.

68. Which of the following is/are correct regarding the shape of Total revenue under Perfect Competition?
   (i) TR curve is the straight line from the origin.
   (ii) Its slope is constant.
   (iii) TVC curve is ‘S’ shaped.
   (iv) Its slope changes with change in output.
   (a) (i) & (ii) Only
   (b) (iii) & (iv) only
   (c) (i) & (iii) only
   (d) (ii) & (iv) only

69. Perfectly elastic demand curve signifies that
   (a) The firm does not exercise any control over the price of the product.
   (b) The firm can sell any amount of the product as it likes at the ruling price.
   (c) Both a & b
   (d) None

70. A Perfectly Competitive firm can earn, in the short run.
   (a) Normal profit
   (b) Super normal profit
   (c) Can incur loss
   (d) All of the above

71. If under Perfect Competition, the price line lies below the average cost curve, the firm would.
   (a) Make only normal profit
   (b) Incur loss
   (c) Make abnormal profit
   (d) Profit cannot be determined

72. The concept of supply curve is relevant only for
   (a) Perfect Competition
   (b) Monopoly
   (c) Monopolistic competition
   (d) Oligopoly
73. The condition of the long run equilibrium for a competitive firm is
   (a) $MC = MR = AR$  (b) $MC = AC = AR$
   (c) $MC = MR = AC$  (d) $MC = MR = AR = AC$

74. The short-run supply curve of a firm under Perfect Competition is the same as:
   (a) Average variable costs
   (b) Marginal cost curve
   (c) Marginal cost above average variable cost curve.
   (d) Average total cost curve.

75. Profit maximizing firm will stop production in the short run if price is
   (a) Less than average cost  (c) Less than average variable cost
   (b) Below the marginal cost  (d) Equal to average cost

76. Which of the following is not correct about Perfect Competition
   (a) In the long run the firms always earn only normal profit.
   (b) The firm could incur losses in the short run.
   (c) The individual firm is a price taker.
   (d) The demand curve being faced by a firm is unit elastic.

77. The average revenue curve of a firm in Perfect Competition is:
   (a) U-shaped  (c) Vertical
   (b) L-shaped  (d) Horizontal

78. Two opposing forces that reach balance in market equilibrium are:
   (a) Demand & Supply  (c) Govt. & Scarcity
   (b) Labour & Capital  (d) Govt. & general public

79. In Perfectly Competitive firm when total revenue curve takes the form of a straight line, which passes through the origin, we may deduce that
   (a) Price exceeds marginal revenue
   (b) Price & marginal revenue are equal
   (c) Total costs & Total revenue are equal
   (d) Elasticity of demand for the product is unity.

80. Using Total Revenue & total cost curves, the level of output that gives maximum profits will be one where:
   (a) TR & TC curves intersect
   (b) Where the gap between TR & TC is maximum & TR curve lies below TC Curve.
   (c) Where the gap between TR & TC maximum & TR curve lies above TC curve.
   (d) Where TR = TC curve.
81. Efficient allocation of resources is likely to be achieved under
   (a) Monopoly                       (c) Perfect Competition
   (b) Monopolistic Competition      (d) Any market form

82. By ‘normal profit’ we mean
   (a) The profit made by the marginal entrepreneur in a normal year.
   (b) The payment made to the marginal entrepreneur for his abilities.
   (c) The surplus profit made by the least efficient firms.
   (d) The payment needed to keep an entrepreneur in an industry.

83. Under competitive conditions the industry will be in equilibrium:
   (a) When each firm is in equilibrium equating MC with MR.
   (b) When all firms are earning only normal profits.
   (c) When firms outside have no tendency to enter the industry & those within, have no
       tendency to leave the industry.
   (d) When all the three conditions are fulfilled.

84. Under Perfect Competition, a firm will be in equilibrium when its AR is:
   (a) At a maximum.
   (b) At a minimum.
   (c) Covering only prime costs of production.
   (d) Covering wages & salaries only.

85. The competitive equilibrium leads to:
   (a) The firms producing with excess capacity.
   (b) The firms producing at their minimum costs.
   (c) Firms producing at a cost higher than the minimum.
   (d) Some firms producing under decreasing costs & others under increasing costs.

86. If more firms enter in a competitive industry the theory predicts that:
   (a) Both marginal & average cost curves rises.
   (b) The industry short run supply curves shifts upwards to the left.
   (c) Output of every firm increases.
   (d) The price of the product rises.

87. A perfectly competitive firm will always expand output as long as:
   (a) Rising marginal cost is less than price.       (c) Rising marginal cost is <AC but>AVC
   (b) Rising marginal cost is less than MR          (d) All of the above

88. Long run equilibrium price of a perfect competitive firm is always
   (a) Above the LAC                              (c) Equal to AFC
   (b) Below the LAC                              (d) Equal to LAC

89. A Perfectly Competitive industry becomes a monopoly with the same cost conditions, it will now sell.
   (a) An unchanged output at a higher price.       (c) A larger output at a higher price.
   (b) A larger output at the old price.           (d) A reduced output at a higher price.
90. From the resource allocation viewpoint, Perfect Competition is preferable because
   (a) Firm operates at excess capacity levels.
   (b) There is whole variety of output produced.
   (c) There is no restriction on entry & exit of firm
   (d) There is no idle capacity.

91. Under Perfect Competition, under long run a firm can produce with:
   (a) An optimum plant
   (b) An optimum output
   (c) Maximum profit
   (d) Identical products at low cost.

92. Under Perfectly Competitive market & in case of decreasing marginal cost the firm’s
equilibrium with respect to level of production.
   (a) Cannot be achieved.
   (b) Can be achieved after a small level of output.
   (c) Can be achieved after a high level of output.
   (d) Will result in run-away inflation.

93. Profit of the firm will be more at:
   (a) MR = MC
   (b) Additional revenue from extra unit equals its additional cost
   (c) Both a & b
   (d) None

94. What should firm do when marginal revenue is greater than marginal cost?
   (a) Firm should expand output
   (b) Firm should decrease output
   (c) Effect to be made to make them equal
   (d) All

95. Total revenue is a straight positively sloping line from origin under:
   (a) Monopoly
   (b) Perfect Competition
   (c) Monopolistic competition
   (d) Oligopoly.

96. Total revenue minus total explicit cost is called:
   (a) Profit
   (b) Economic Profit
   (c) Super – Normal Profit
   (d) Accounting Profit.

97. Under Perfect Competition, slope of MR is
   (a) Negative
   (b) Falling
   (c) Zero
   (d) Rising

98. What is that point called where, P = minimum SAC
   (a) Super- normal Profit
   (b) Loss- making point
   (c) Shut-down Point.
   (d) Break-Even Point.

99. Under Perfect Competition when price line becomes tangent to the minimum point
    of AVC, it is called.
    (a) Minimum Profit
    (b) Minimum Loss
    (c) Shut Down Point
    (d) Break-even Point.

100. A competitive firm in the short run incurs losses. The firm continues production, if
    (a) P > Min AVC
    (b) P = Min AVC
    (c) P > = Min AVC.
    (d) P ≥ AVC.

101. Under ______ market condition, the firm makes normal profit during long run period
     (a) Monopoly
     (b) Perfect Competition.
     (c) Oligopoly
     (d) None. 4.33
102. If under Perfect Competition, the price line lies below the average cost curve, the firm would:
   (a) Make only normal profit
   (b) Makes super-normal profits.
   (c) Incur Loss.
   (d) None.

103. The MR curve cuts the horizontal line between Y axis & demand curve into:
   (a) Two unequal parts.
   (b) May be equal or unequal parts.
   (c) Two equal parts.
   (d) None.

104. A firm will shut down, in the short run if:
   (a) It suffers loss
   (b) Fixed Costs exceed revenue.
   (c) Variable Costs exceed revenue.
   (d) Total Costs exceed revenue.

105. Which of the following is not a feature of zero-profit point?
   (a) The output of the firm makes nil profit.
   (b) Marginal Cost equals fixed cost.
   (c) Revenue just covers cost.
   (d) Price equals average cost.

106. Which of the following shows super normal profit:
   (a) Selling price is greater than average cost.
   (b) Selling price is equal to average cost.
   (c) Average variable cost is more than price.
   (d) Average variable cost is less than price.

107. A perfectly competitive firm in short run, incurs loss but continues production because the price covers:
   (a) MC
   (b) AVC & some part of AFC
   (c) AFC & some part of AVC
   (d) None of the above.

108. What is the formula for calculating loss per unit?
   (a) TC – TR
   (b) AC – AR
   (c) MC – MR
   (d) AVC – AR

109. Selling costs are
   (a) Not required under Perfect Competition
   (b) Not required under duopoly
   (c) Required under Perfect Competition
   (d) None.

110. Which of the following is not a condition of Perfect Competition?
   (a) A large number of firms
   (b) Perfect mobilization
   (c) Informative advertisement to ensure that consumers have good information
   (d) Freedom of entry & exit into & out of the market.

111. Which of the following is not a characteristics of a perfectly competitive market?
   (a) Large number of firms in the industry
   (b) Outputs of the firms are perfect substitutes for one another.
   (c) Firms face downward – sloping demand curves
   (d) Resources are very mobile.

112. Which of the following is not a characteristics of perfectly competitive market?
   (a) A large number of firms
   (b) Perfect mobility of factors
   (c) Firms generate small but positive super normal profit in the long run.
   (d) Free entry & exit of firm.

4.34
113. Which of the following markets would most closely satisfy the requirements for a perfectly competitive market?
(a) Electricity  
(b) Cable television  
(c) Milk  
(d) Cola

114. In Perfect Competition, necessary condition of short run equilibrium is:
(a) SMC = MR  
(b) SMC > MR  
(c) Slope of SMC > Slope of MR  
(d) All

115. A market structure which has large number of firms producing & selling homogeneous product & the customers have full knowledge about the equilibrium price is:
(a) Perfect Competition  
(b) Monopoly  
(c) Monopolistic Competition  
(d) Oligopoly

Mathematical Questions on Perfect Competition:

116. When AR = 10, AC = 8 perfectly competitive firm makes:
(a) Normal profit  
(b) Super normal profit  
(c) Loss  
(d) None

117. The equilibrium price from the following table is

<table>
<thead>
<tr>
<th>Price</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
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<td>900</td>
<td>800</td>
<td>700</td>
<td>600</td>
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<tr>
<td>Supply</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td>700</td>
<td>800</td>
<td>900</td>
<td>1000</td>
<td>1100</td>
</tr>
</tbody>
</table>
(a) Rs. 2  
(b) Rs. 3  
(c) Rs. 4  
(d) Rs. 5

118. When price is 20, quantity demanded is 9 units, and when price is Rs. 19, quantity demanded is 10 units. Based on this information, find out marginal revenue for increase in output from 9 units to 10 units.
(a) Rs. 20  
(b) Rs. 19  
(c) Rs. 10  
(d) Re. 1

119. When price is 20, quantity demanded is 15 units, & when price is Rs. 18, quantity demanded is 16 units. Based on this information find out marginal revenue from an increase in output from 15 units to 16 units
(a) Rs. 18  
(b) Rs. 16  
(c) Rs. 12  
(d) Rs. 28

Consider table and answer 120, 121, 122

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Price</th>
<th>Total Cost</th>
</tr>
</thead>
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<tr>
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<td>109</td>
</tr>
<tr>
<td>2</td>
<td>190</td>
<td>123</td>
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<td>385</td>
</tr>
<tr>
<td>5</td>
<td>160</td>
<td>541</td>
</tr>
</tbody>
</table>
120. At the profit maximizing level, what price should be charged?
(a) Rs.190  
(b) Rs. 180  
(c) Rs. 170  
(d) None

121. Find out amount of profit for five unit
(a) Rs. 91  
(b) Rs. 251  
(c) Rs. 259  
(d) None

122. Find out total revenue for three units output
(a) Rs. 380  
(b) Rs. 540  
(c) Rs. 590  
(d) None

Consider table & answer 123, 124, 125, 126, 127

<table>
<thead>
<tr>
<th>Production</th>
<th>Price</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
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<td>273</td>
</tr>
<tr>
<td>7</td>
<td>88</td>
<td>325</td>
</tr>
</tbody>
</table>

123. When production = 6 units, the firm’s:
(a) Fixed cost is zero and variable cost is 273  
(b) Fixed cost is zero and variable cost is 228  
(c) Fixed cost is 45 and variable cost is 273  
(d) Fixed cost is 45 and variable cost is 228

124. When production = 5 units, total revenue is:
(a) Rs. 100  
(b) Rs. 230  
(c) Rs. 500  
(d) None

125. When production = 6 units, the firm’s marginal revenue is:
(a) Rs. 384  
(b) Rs. 94  
(c) Rs. 64  
(d) Rs. 2

126. On production = 7 units, the firm’s profit is:
(a) 0  
(b) Rs. 41.57  
(c) Rs. 291  
(d) None

127. To maximize profit the firm’s should produce:
(a) 0 unit  
(b) 3 units  
(c) 5 units  
(d) 7 units
Questions on Monopoly and Price-Discriminating Monopoly

128. The market which has single seller no-substitutes for the product & freedom to entry of new firms is completely blocked is the case of:
   (a) Perfect Competition  (c) Duopoly
   (b) Oligopoly            (d) Monopoly

129. The firm & the industry are one & the same in ______________.
   (a) Perfect Competition (c) Duopoly
   (b) Monopolistic competition (d) Monopoly

130. Which of the statements is correct?
   (a) Price rigidity is an important features of monopoly.
   (b) Selling costs are possible under Perfect Competition.
   (c) Under Perfect Competition factors of production do not move freely as there are legal restrictions.
   (d) An industry consists of many firms.

131. Which of the following statements is incorrect?
   (a) Under Monopoly there is no difference between a firms an industry.
   (b) A Monopolist may restrict the output & raises the price.
   (c) Commodities offered for sale under a Perfect Competition will be heterogeneous.
   (d) Product differentiation is peculiar to Monopolistic Competition.

132. Pure monopoly exists.
   (a) When there is a single producer.
   (b) When there is a single producer without any close substitutes.
   (c) When there is a single producer with close substitutes.
   (d) When a few producers control the industry.

133. A firm can sell as much as its at the market price. The situation is related to
   (a) Perfect Competition  (c) Monopolistic competition
   (b) Monopoly            (d) Oligopoly

134. Which of the following is likely to confirm the presence of Monopoly power in the market?
   (a) An industrial concentration ratio whereby the three largest firms account for 80% of sales.
   (b) Firms are producing where the average revenue exceeds the marginal cost of production.
   (c) All firms are producing at less than optimum output.
   (d) All the firms are selling their products at one price.

135. Monopolist can fix:
   (a) Both price & output  (c) Neither price nor output
   (b) Either price or output (d) None

136. The strength of Monopoly may be assessed by
   (a) The size of his total revenue
   (b) The gap between AR & MR
   (c) The size of consumer’s surplus accruing to him.
   (d) The long term price of his product.

137. Monopoly power refers to the firm’s ability to:
   (a) Earn economic profit  (d) Posses economies of scale.
   (b) Restrict entry into the industry.
   (c) Set prices above marginal cost.
138. A Monopoly producer has:
(a) Control over production but not price
(b) Control over production as well as price
(c) Control neither on production nor on price.
(d) Control over production, price & consumers.

139. All of the following are characteristics of monopoly except:
(a) There is a single firm
(b) The firm is a price taker
(c) The firm produces a unique product
(d) The existence of some advertising

140. What is the formula for calculating profit per unit?
(a) TC – TR
(b) AR – AC
(c) MC – MR
(d) AVC – AR

141. When a monopoly maximizes profit, we know that it is
(a) Producing in the short run.
(b) Producing in the long run.
(c) Producing at an output where MR = MC & P> ATC.
(d) Producing at an output where MR = MC & TC = TR.

142. Under monopoly, degree of control over price is:
(a) None
(b) Some
(c) Very considerable
(d) None

143. A circumstances in which it might pay a Monopolist to cut the price of his product is where:
(a) MC is falling.
(b) MR is greater than MC
(c) His advertising costs are increasing
(d) Average costs are increasing

144. Under Monopoly & Imperfect Competition MC is:
(a) More than the price.
(b) Less than the price
(c) Equal to the price
(d) Anyone

145. Equilibrium of Monopolist will never lie below the middle point of the AR curve because below the middle point.
(a) Elasticity of demand is less than one
(b) MR is negative
(c) Both a & b
(d) Market laws cease to be operated.

146. Monopolist can fix
(a) Both price and output
(b) Either price or output
(c) Neither price nor output
(d) None

147. If a monopolist is producing under decreasing cost conditions, increase in demand is beneficial to the society because:
(a) Consumers get better quality goods.
(b) Cost of production falls & hence price will follow.
(c) Goods will be sold in many markets.
(d) None of the above.
148. The essential conditions for price discrimination is/are:
   (a) It is not possible to transfer any unit of the goods from one market to another.
   (b) It is not possible for the buyers in the dearer market to transfer themselves into the cheaper market
   (c) Both a & b
   (d) None

149. In the case of price discrimination price will be higher in the market where:
   (a) Demand is perfectly elastic.  (c) Demand is unitary elastic.
   (b) Demand is highly elastic.  (d) Demand is less elastic.

150. Price discrimination is undertaken with the aim of:
   (a) Increasing sales & maximizing profits.
   (b) Reducing sales & raising prices
   (c) Minimising cost & maximizing revenue.
   (d) Serving the markets without earning profits.

151. Which of the following statements is correct?
   (a) A monopolistic never earns losses.
   (b) In a Perfectly Competitive Market, the products are differentiated.
   (c) In a monopolistically competitive market, the products are differentiated.
   (d) Perfect Competition makes equilibrium at loss in long run

152. A firm practicing price discrimination will be:
   (a) Charging different prices for different qualities of a product.
   (b) Buying in the cheapest & selling in the dearest markets
   (c) Charging different prices in different markets for a product.
   (d) Buying only from firm selling in bulk at a distance.

153. One important condition for successful price discrimination about elasticity of demand is:
   (a) Elasticity of demand must be same in different market.
   (b) Elasticity of demand must be different in different markets.
   (c) Elasticity of demand must be one in different market
   (d) Elasticity of demand must be infinite in different markets.

154. Price discrimination takes place when a given product is sold at more than one price & these price differences are not justified by __________ difference.
   (a) Revenue  (b) Cost
   (c) Either a or b  (d) Neither a nor b

155. Why is that first degree discrimination is termed as the extreme form of price discrimination?
   (a) All the industry discriminate in price for almost all the products they are producing.
   (b) Firms in the industry discriminate in price for almost all the products they are producing.
   (c) Firms earn the least profit in this type of discrimination, they are just able to cover it.
   (d) In this type of discrimination firms charge the consumers the maximum price.

156. Which of the following statements regarding first degree price discrimination is not true?
   (a) This is the most extreme form of price discrimination.
   (b) This pricing scheme involves charging a consumers the maximum he is willing to pay.
   (c) This is the most profitable pricing scheme.
   (d) There is a big consumer surplus.
157. Under ________ the monopolist will fix a price which will take away the entire consumer surplus.
   (a) 1st degree discrimination  (b) 2nd degree discrimination
   (c) 3rd degree discrimination  (d) None.

158. Price discrimination is related to:
   (a) Time  (b) Size of the purchase
   (c) Income  (d) Any of the above

159. If the monopolist’s price = 20, elasticity of demand is 1.6. Its marginal revenue.
   (a) 6.4  (b) 3.2
   (c) 1.6  (d) 7.5

Consider the following fig & answer 160 & 161.

160. In this monopoly market, at equilibrium output ‘e’, it:
   (a) Incurs loss.
   (b) Enjoys profit.
   (c) Incurs loss but continues production.
   (d) All.

161. For a rational monopolist, choose the suitable option from the following:
   (a) Monopolist shuts down production.
   (b) Monopolist continues production till point ‘e’ is reached.
   (c) Monopolist continues production till ‘M’ point is reached.
   (d) None.

162. Monopoly has no closed substitutes goods and therefore AR is:
   (a) Parallel  (c) Upward
   (b) Downward  (d) None

Questions of Monopolistic Competition:

163. A market structure in which many firms sell products that are similar but not identical is known as:
   (a) Monopoly  (b) Monopolistic competition
   (c) Perfect Competition  (d) Oligopoly

164. Advertisement costs are:
   (a) Not required under Perfect Competition (b) Not required under duopoly
   (c) Required under Perfect Competition  (d) None

165. Which of the following is not a feature of monopolistic competition?
   (a) Large number of sellers  (b) Differentiated products
   (c) Different prices  (d) No single seller has control over the market

166. Price is:
   (a) Uniform under monopolistic competition  (b) Not uniform in monopolistic competition.
   (c) Uniform under monopoly  (d) Both ((b) & (c))

4.40
167. Consider the monopolistically competitive industry alone. We know that
   (a) It has innumerable barriers to firm entry.
   (b) It has differentiated products.
   (c) Some of its firms are monopolists, while others are competitive.
   (d) It has a small number of very large firms, & each faces a horizontal demand curve.

168. One difference between oligopoly & monopolistic competition is that
   (a) The monopolistically competitive industry has fewer firms.
   (b) Goods are differentiated in oligopoly not in monopolistic competitive firm.
   (c) Both have barriers to firm entry, but barriers in oligopoly are impossible to overcome.
   (d) Fewer firms compete in oligopoly than in monopolistic competition.

169. Under monopolistic competition in the long run, what will the firm earn?
   (a) Super normal profits.
   (b) Normal profits.
   (c) Break even.
   (d) Any one of the above.

170. The difference between least cost output & profit maximising output is called
   (a) Reserve capacity.
   (b) Excess capacity.
   (c) Normal capacity.
   (d) Abnormal capacity.

171. Cigarette industry most closely related to
   (a) Perfectly competitive model.
   (b) Imperfectly competitive model.
   (c) Monopolistic model.
   (d) None.

172. Which of the following is not a characteristic of a monopolistically competitive market
   (a) Free entry & exit
   (b) Abnormal profits in the long run
   (c) Many sellers
   (d) Differentiated products

173. Under which market condition though the firms earn normal profits in the long run,
     there is always excess capacity with them.
   (a) Perfect Competition
   (b) Monopoly
   (c) Oligopoly
   (d) Monopolistic competition

174. A firm in long run equilibrium under Monopolistic Competition makes only:
   (a) Normal Profits
   (b) Monopoly profits
   (c) Super normal profits
   (d) Losses

175. Monopolistic competition differs from Perfect Competition due to:
   (a) Large number of firms & heterogeneous product.
   (b) Large number of firms & homogeneous product.
   (c) Small number of firms & differential products.
   (d) Only a few firms & similar products.

176. Selling costs are incurred under Monopolistic Competition to:
   (a) Attract more customers.
   (b) Prevent its customers from going to others.
   (c) Establish superiority of its product vis-à-vis the others.
   (d) All of the above.

177. The sale of ‘branded’ articles is common in a situation of:
   (a) Excess capacity
   (b) Monopolistic competition.
   (c) Monopoly
   (d) Pure Competition.
178. Under Monopolistic Competition there can be freedom of entry in the sense of a freedom to produce:
   (a) Close substitutes.  (b) Perfect substitutes
   (c) Complementary goods.  (d) Perfect complementary goods.

179. The structure of soap industry in India is best described as:
   (a) Perfectly competitive  (b) Monopolistic Competition
   (c) Monopoly  (d) Oligopoly

180. In the long run, Monopolistic Competition differs from Perfect Competition in that monopolistically competitive firms has:
   (a) Excess profits  (b) Excess capacity
   (c) Zero fixed cost  (d) All of the above.

181. Which one of the following statements is not true with respect to a firm in circumstances of imperfect competition:
   (a) Advertising will improve its profit
   (b) There is no perfect substitute for the product it sells.
   (c) MR is equal to price at all output levels.
   (d) Its demand curve is inelastic at some within its entire range.

Questions on Oligopoly

182. Pure oligopoly or perfect oligopoly is based on products.
   (a) Differentiated (eg. Talcum powder)
   (b) Homogeneous (eg. Aluminium Industries)
   (c) Unrelated
   (d) None

183. Differentiated oligopoly is based on
   (a) Differentiated (eg. Talcum powder)
   (b) Homogeneous (eg. Aluminium Industries)
   (c) Unrelated
   (d) None

184. Open and closed Oligopoly implies
   (a) Entry and competition with existing ; Entry is restricted
   (b) Barriers to competition ; Free entry
   (c) Entry ; Competition with new firms
   (d) All

185. When few firms of the Oligopolist come to a common understanding in fixing price and output
   (a) Collusive oligopoly
   (b) Non-collusive oligopoly
   (c) Partial oligopoly
   (d) None

186. When there is absence of any understanding among oligopoly firms in fixing price & output:
   (a) Collusive
   (b) Competitive oligopoly
   (c) Partial Oligopoly
   (d) None
187. In Oligopoly, when industry is dominated by one large firm which is considered as leader of the group:
   (a) Collusive oligopoly
   (b) Non-collusive oligopoly
   (c) Partial oligopoly
   (d) None

188. When the products are sold through a centralized body, Oligopoly is known as:
   (a) Organised oligopoly
   (b) Syndicated Oligopoly
   (c) Partial Oligopoly
   (d) None

189. In Oligopoly we observe “Competition among ____________.
   (a) 20 to 30 firms
   (b) 30 to 50 firms
   (c) The few
   (d) Infinite numbers.

190. Interdependence, importance of advertising & selling group behavior are features of:
   (a) Perfect competition
   (b) Monopoly
   (c) Monopolistic competition
   (d) Oligopoly

191. Oligopolistic industries are characterized by:
   (a) A few dominant firms & substantial barriers to entry
   (b) A few large firms & no entry barriers
   (c) A large number of small firms & no entry barriers.
   (d) One dominant firm & low entry barriers
192. When an oligopolist individually chooses its level of production to maximize its profits, it charges a price that is:
(a) More than the price charged by either monopoly or a competitive market.
(b) Less than the price charged by either monopoly or a competitive market
(c) More than the price charged by a monopoly & more than the price charged by a competitive market.
(d) Less than the price charged by a monopoly & more than the price charged by a competitive market.

193. If firms in the toothpaste industry have the following market shares, which market structure would best describe the Industry?

<table>
<thead>
<tr>
<th>Market Share</th>
<th>(% of market)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toothpaste</td>
<td>18.7</td>
</tr>
<tr>
<td>Denti Paste</td>
<td>14.3</td>
</tr>
<tr>
<td>Shinibright</td>
<td>11.6</td>
</tr>
<tr>
<td>I can’t believe it’s not toothpaste</td>
<td>9.4</td>
</tr>
<tr>
<td>Brighter than white</td>
<td>8.8</td>
</tr>
<tr>
<td>Pastystuf</td>
<td>7.4</td>
</tr>
<tr>
<td>Others</td>
<td>29.8</td>
</tr>
</tbody>
</table>

(a) Perfect Competition  (b) Monopolistic  (c) Oligopoly  (d) Monopoly

194. One characteristic not typical of oligopolistic industry is
(a) Horizontal demand curve
(b) Too much importance to non-price competition
(c) Price leadership
(d) A small number of firms

195. The structure of cold drink industry in India is best described as:
(a) Perfectly competitive  (b) Monopolistic competition
(c) Monopoly              (d) Oligopolistic

196. Which of the following statements is incorrect?
(a) Even monopolistic can earn losses
(b) Firms in perfectly competitive market are takers
(c) It is always beneficial for a firm in a perfectly competitive market to discriminate prices.
(d) Kinked demand curves is related to an Oligopolisitic market.
197. The kinked demand curve model of oligopoly assumes that:
   (a) Response to a price increase is more than the response to a price decrease.
   (b) Response to a price decrease is more than the response to a price increase.
   (c) Elasticity of demand is constant regardless of whether price increases or decreases.
   (d) Elasticity of demand perfectly elastic if price increase & perfectly inelastic if price decreases.

198. The kinked demand hypothesis is designed to explain in the context of Oligopoly:
   (a) Price & output
   (b) Price leadership
   (c) Price rigidity
   (d) Collusion among rivals.

199. In the ‘Kinked – demand curve’ model the upper portion of the demand curve is:
   (a) Elastic
   (b) Inelastic
   (c) Perfectly elastic
   (d) Unitary elastic

200. Behavioural assumption of Sweezy’s kinked demand curve model is:
   (a) Oligopolists recognise mutual dependent
   (b) Oligopolists match price cuts but not price increases.
   (c) Oligopolists match price increases but not price cuts.
   (d) Oligopolists do not match price cuts & price increases.

201. The length of discontinuity of MR under kinked demand model depends on:
   (a) Same elastic
   (b) Difference in elasticity at ‘kink’ point.
   (c) AR curve
   (d) None.

202. Under oligopoly the ‘Kinked demand’ curve model explains:
   (a) Price fluctuations
   (b) Price rigidity
   (c) Normal Price.
   (d) Price & Output determination.
203. Firm aims at maximisation of which profits?
   (a) Super-normal profit.
   (b) Normal-profit.
   (c) Total profit.
   (d) Average profit.

204. At point kink of Oligopoly
   (a) Elasticity's are same
   (b) Slopes are same
   (c) Differences in elasticity take place
   (d) None.

205. Cartel and price leadership are the features of:
   (a) Monopoly
   (b) Monopolistic Competition
   (c) Oligopoly
   (d) None

206. Which of the following is incorrect?
   (a) Under monopoly there is no different between a firm and an industry
   (b) A monopolist may restrict the output and raises the price
   (c) Commodity offered for sale under a perfect competition will be heterogeneous
   (d) Price leadership is feature of Oligopoly
(E) **PRICE DISCRIMINATION (UNDER MONOPOLY)**
Price discrimination occurs when a producer sells a specific commodity or service to different buyers at two or more different prices for reasons not associated with difference in cost. For example, Railway, Doctors, lawyears, and Chartered Accountants charge different rates for their services that vary according to the income of their clients.

**Objectives of Price Discrimination:**
(a) to earn maximum profit  
(b) to dispose of surplus stock.  
(c) to enjoy the economics of scale  
(d) to capture foreign markets  
(e) to secure equity through pricing

**Degree of price Discrimination:**  
Prof. Pigou has related the price discrimination with the consumer surplus enjoyed by the consumers in three ways.  
1. **First degree price discrimination**: In this, monopolist will fix price which will be take away the entire consumers’ surplus.  
2. **Second degree price discrimination**: take away the part of the consumers’ surplus.  
3. **Third degree price discrimination**: here monopolist charge different prices in different sub-markets.

**Conditions for price discrimination:**  
There are following major conditions under which price discrimination is possible and profitable:

1. **Full control over supply**: Price discrimination is applicable only in monopoly situation because there is full control over the supply, where there are no rivals firms. It is not possible in perfectly competitive market where a large number of sellers are selling a homogeneous product.  
2. **Division of market into two or more sub-markets**: The buyers or markets must be separable. A seller can practice price discrimination only when he is able to divide the markets into two or more sub-markets.  
3. **Different price elasticity under different markets**: The monopolist can discriminate the prices only if the price elasticities in the two markets are different. This is because,
monopolist can charge higher price from that market whose price elasticity is less than one and can charge lower price from that market whose price elasticity is greater than one.

4. **No possibility to resale**: It should not be possible for the buyers of low-priced market to resell the product to the buyers of high-priced market.

Equilibrium under price discrimination:
In market A, \( MC = MR_A \) and in market B, \( MC = MR_B \) and in total market \( MC = AMR \), hence
\[
MC = AMR \quad \text{(in aggregate market)}
\]
\[
MC = MR_A = MR_B \quad \text{(in individual markets)}
\]

The AR curve in the long-run is not tangent to the AC curve at the lowest point. This shows that each firm produces at before the lowest LAC or produces less than the optimum output and charges from the customers a price higher than the competitive price. A firm under monopolistic competition has always excess capacity but perfect competition never has excess capacity and monopoly may or may not be.

**SIMILARITY IN ALL MARKET FORMS**

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<thead>
<tr>
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<tbody>
<tr>
<td>2. Profit under short run</td>
<td>(a) In Perfect competition –</td>
</tr>
<tr>
<td>— Super profit ( (AR &gt; AC) )</td>
<td>( MR = AR = Price )</td>
</tr>
<tr>
<td>— Normal profit ( (AR = AC) )</td>
<td>Equilibrium output at ( MC ); ( MR )</td>
</tr>
<tr>
<td>— Losses ( (AR &lt; AC) )</td>
<td>So ( MC = PRICE )</td>
</tr>
<tr>
<td>3. ( MC ) &amp; ( AC ) – U shaped – in every markets</td>
<td>(b) In Monopoly or monopolistic competition–</td>
</tr>
<tr>
<td>4. AR is also known as DD curve</td>
<td>( AR &gt; MR )</td>
</tr>
<tr>
<td>5. Control over output</td>
<td>Equilibrium output at ( MC = MR );</td>
</tr>
<tr>
<td>6. If ( AR &lt; AC ) then it must be ( AR &gt; AVC )</td>
<td>( MC = MR &lt; PRICE )</td>
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<tr>
<td></td>
<td>( PRICE &gt; MC )</td>
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