

### **NEERAJ®**

### PRINCIPLES OF MICROECONOMICS-II

**B.E.C.C.-132**)

**B.A.** General - 2nd Semester

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# Sample Preview of the Solved Sample Question Papers

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### QUESTION PAPER

June - 2023

(Solved)

### PRINCIPLES OF MICROECONOMICS - II

B.E.C.C.-132

Time: 3 Hours ] [ Maximum Marks: 100

Note: Answer questions from each Section as per instructions.

### **SECTION-A**

Note: Answer any two questions from this Section.

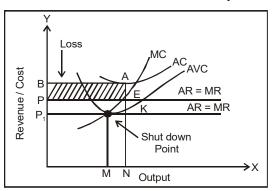
Q. 1. (a) Why is the supply curve of a firm in perfect competition the rising portion of the MC curve which lies above the AVC curve? Describe with the help of a diagram.

Ans. Ref.: See Chapter-1, Page No. 11, Q. No. 2.

**Also See:** A firm will continue to produce if at the equilibrium level of output the Average Revenue of the firm is more than the Average Variable Cost. It means AR > AVC. Otherwise the firm will shut down.

The firm will not produce at the equilibrium output where Average Variable Cost is more than the Average Revenue. If it produces and sells at the market price QE, it suffers additional loss of EF in addition to loss of fixed cost.

But if the equilibrium level of output where AVC = OQ, whereas AR = QE. By continuing the production, the firm not only recovers not only whole of its variable cost, but in addition also recovers a part of their fixed cost. Its total losses would be less if it continues production than if it were to close down its operations.



(b) Why does an oligopolist firm face linked

demand curve? Show the price determination in kinked model of oligopoly.

**Ans. Ref.:** See Chapter-4, Page No. 49, Q. No. 2, Page No. 50, Q. No. 4.

Q. 2. (a) Describe the modern theory of rent. Explain how elasticity of supply of a factor affects rent. Use diagram.

**Ans. Ref.:** See Chapter-7, Page No. 79, 'Modern Theory of Rent', Page No. 81, Q. No. 5.

(b) What is the marginal productivity theory of factors of production? How does it explain the process of factors price determination?

Ans. Ref.: See Chapter-5, Page No. 56, 'Marginal Productivity Theory of Distribution', Page No. 59, Q. No. 7.

Q. 3. (a) Define public goods. Explain the rationale for government intervention in nase of public goods.

Ans. Ref.: See Chapter-9, Page No. 104, Q. No. 5, Page No. 99, 'Public Goods and Market Failure'.

(b) "A Pareto efficient allocation of resources occurs only in a perfectly competitive economy,

where 
$$MRTS_{xy} = MRS_{xy} = \frac{P_X}{P_Y}$$
." Explain with the

### help of an appropriate diagram.

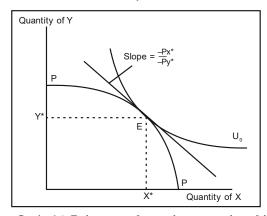
Ans. Attaining a Pareto efficient allocation of resouces requirs that (except when corner solutions occur) the rate of trade-off between any two goods, say x and y, should be the same for all economi agents. In other words, Marginal Rate of Technical Substitution for all producers and Marginal Rate of Substitution for all consumers should be equal.

In a perfectly competitive ecnom, the ratio of the price of x to the price of y, i.e.  $p_x/p_y$  provides this common rate of rade-off to which all agents will adjust. Because prices are treated as fixed parameters both in individuals'

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utility-maximising decisions and in firms' profitmaximising decisions, all trade-off rates between x and y will be equalised to the rate at which x and y can be traded in the market  $(p_y/p_y)$ , i.e.

$$MRTS_{x,y} = MRS_{x,y} = \frac{p_x}{p_y}$$



Q. 4. (a) Bring out the major areas in which WTO has facilitated agreements among its members.

Ans. Ref.: See Chapter-11, Page No. 142, Q. No. 8.

(b) Discuss the impacts of WTO on Indian Economy.

Ans. Ref.: See Chapter-11, Page No. 141, Q. No. 7. Also Add: Implications for India for the various agreements that are signed under WTO are as follows:

- 1. GATS: GATS lead to reduction of Tariff and Non-Tariff Barriers which helped India to participate in the globalisation of services. For example, India has carved a niche for itself in the global market and has emerged as a leading exporter of software services. In several service sectors, including for instance, construction and engineering, health, and education services, India has considerable export potential, due mainly to the availability of skilled and abundant labour.
- 2. Trade Related Investment Measures (TRIMS): India has adopted several foreign investment liberalisation measures since the launch of the New Industrial Policy in 1991. Regulations for both FDI and FPI were simplified and now foreign investment is allowed in almost all sectors.
- 3. Trade Related Intellectual Property Rights (TRIPS): For India, the WTO'S TRIPs agreement became binding from 2005 onwards as the country has got a ten-year transition period (1995-2005) to make the domestic legislation compatible with TRIPs. Here, India has got additional five-year transition period

because of not having product patent regime in critical sector like pharmaceutical. Hence, existing laws were amended and fresh legislations were introduced during this period.

- 4. Agreement on Agriculture (AOA): In the short term the Agreement on Agriculture may not affect India much because both its domestic support and export subsidy are negative i.e. less than the minimal 10% in product specific domestic support. Moreover, the safeguards provided in the Agreement for the developing countries protect India from any major impact of liberalisation of the world trade. However, in the long term, due to advantage of cheap labour that India enjoys, the cost of production is lower than any other countries, therefore inspite of its lower productivity as compared to the developed countries, the prices for agricultural products such as rice, tea, sunflower oil and cotton, will still remain lower than the world price. As a result, import into Indian markets will not be attractive as the domestic market prices in such products remain lower than the international standard. Hence, the impact of large scale imports due to liberalisation of the world economy will not be much.
- 5. Agreement on Clothing and Textiles: After ATC, quota free regime of international trade from January 2005 has made a positive impact on the Indian textile and clothing (T&C) exports, as well as on the overall exports of the country has been further substantiated. The export trade in the earlier stage was confined to raw material and intermediate products (yarn and fabric). It has now shifted to more value added products, like readymade garments and made-ups. A significant benefit comes from a positive impact on employment in these labour intensive industries. Post Quota changes continue to shape global textiles trade.

### **SECTION-B**

Note: Attempt *any four* questions from this Section.

Q. 5. What is price discrimination? Explain price and output determination using third-degree price discrimination.

**Ans. Ref.:** See Chapter-2, Page No. 18, 'Price Discrimination Under Monopoly'.

Q. 6. How does a tax imposed on rent affect supply of factor and rent rate? Explain.

Ans. Even after the tax imposition, the total quantity demanded for land's services does not change even though the demand curve shifts. Even with a tax at the rate of 50%, people will continue to emand the entire fixed supply of land. Hence with land fixed in supply,

## Sample Preview of The Chapter

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### PRINCIPLES OF MICROECONOMICS-II

### **Perfect Competition**



### **INTRODUCTION**

In the earlier chapters we have studies how the concepts of demand and supply. Demand refers to the purchase of goods and services and supply refers to sale of goods and services. Supply and demand determine an equilibrium price, limited output and allocated resources in a market system. In this chapter we will define how a firm maximizes its profits under various market structures. There are four main categories of market forms: perfect competition, monopolistic competition and oligopoly.

### **CHAPTER AT A GLANCE**

### DIFFERENT MARKET FORMS

A perfect competition is said to exist where the following characteristics are satisfied:

- (i) Large number of buyers and sellers.
- (ii) Product homogeneity.
- (iii) Freedom in entering or leaving the market.
- (iv) No government restrictions, each buyer or seller has no control over price.

### Monopoly

In a market situation where there is only on e seller in the market producing a commodity for which there is no close substitute. The firm itself is the industry. The firm has the complete control over the supply of the product and gets the super normal profit in the short and the long run.

### **Monopolistic Competition**

Monopolistic Competition is the situation between the monopoly and perfect competition. In this situation there are many sellers of the product, but the product of each seller is a bit different from the product of other sellers. Each firm is a sort of monopolist and between such monopolists there is a competition. The product differentiation manifest itself in the trade mark, name of the brand, quality determination or in different facilities and services offered to the consumers. Firms have smaller degree of control over the price.

### Oligopoly

Oligopoly is the market form where there are a few number of large sellers, each of which producing a considerable proportion of the total output of the total output of the industry. Entry in the oligopoly market is very difficult. No firm can make independent decision about the changes in the price. The market is having the interdependence among its members.

### ASSUMPTIONS FOR PERFECT COMPETITION

There are two basic assumptions in the perfect competition market, behaviour of the individual firm and the nature of industry in which it operates. There are a large number of firms, selling, a particular commodity is so large that any increase of decrease in the supply of one particular firm fails to make any influence on the price of the market commodity. It is therefore said that a firm under perfect competition is a price taker.

Industry is characterized by freedom of entry or exit. It means that any new firm can enter the industry and if it wants to exit, it can stop the production and can leave the market. Existing firm does not have any control over it.

An individual firm is a 'Price Taker' and not a 'Price Maker', only the price prevails in the market, for the product that is available in the market at that particular time.

All sellers sell identical or homogeneous units of a given product. The firm can't differentiate among the buyers. So the conclusion is that there will not be the possibility to prefer the product of another seller. Thus, the price of the product throughout the market will be the same.

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There is a perfect knowledge of the buyers. Both buyers and the sellers are fully aware of the price prevailing in the market, so the buyer will not pay unknowingly more than is necessary for their purchase.

### Pure Vs. Perfect Competition

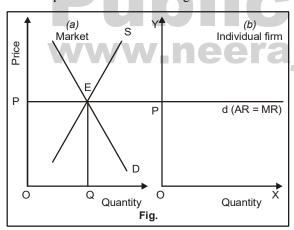
Economists draw a line of distribution between price and perfect competition. The distinction between the pure and the perfect competition is much wider term while pure competition is narrower one. Pure competition has only three chief characteristics viz. the large number of buyers and sellers, homogeneous products and free entry and exit of the firm. To convert the pure competition buyers and sellers have full knowledge of the market conditions and factors of productions have perfectly mobile.

### EQUILIBRIUM UNDER PERFECT COMPETITION

The perfect competitive firm is the price taker. But equilibrium price occurs at a point at which the market demands for a commodity. This uniformly prevails in a perfect competitive market.

Equilibrium Price: Market Demand = Market Supply

At equilibrium price all buyers satisfy their stipulated quantity of a commodity. The equilibrium price therefore is the price at which demand and supply are equal to each other or the purchases and the sales of the buyers and the sellers respectively coincide. The market equilibrium is shown in Figure below:



### **EQUILIBRIUM OF THE FIRM**

You have studied earlier; equilibrium is the position of rest or balance. It is established when there is no change. It is clear that a profit maximizing firm will be in equilibrium when it earns maximum profits. Profits are the different between total revenue and the total costs

$$\pi = TR - TC$$
Where 
$$\pi = profit$$

Profits reflect the change in the output. Whereas, a change in the output raises cost of production and also affects the total revenue of the firm.

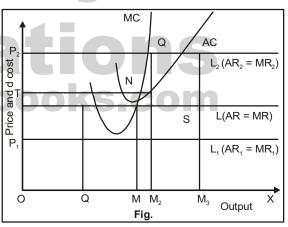
Thus, there is a perfect relationship between MR and MC. It is important in determining the output level of a firm which wants to maximize the profit.

- If MR is greater than MC (MR>MC) and MC is rising, the firm will increase its output;
- If MR is smaller than MC (MR<MC) and MC is rising, the firm will decrease its output;
- If MR is equal to MC (MR=MC) and MC is rising, the firm has reached its equilibrium level of output that maximize profit.

Thus, there are two main conditions to be fulfilled in a perfectly competitive industry.

(i) Each firm must be in equilibrium, that means MR=MC, and (ii) The industry as a whole is in the equilibrium. This will occur when no new firm will enter or leave the industry. We can say that every firm is earning normal profit. Normal profit supports every entrepreneur to stay in the industry.

Average cost curve is a U shaped curve. In perfect competition (AR=MR) average revenue curve is horizontal line.



Equilibrium of the firm can occur when MC cuts AC at point N. Here, its demand curve is also tangent to its average cost curve. Here, average revenue is also equals to marginal revenue. Hence, in perfect competition MR = MC = AR = AC.

According to the above figure it is clear that the firm will not get normal profit if it have an equilibrium below the level of PL (AR=MR). The average revenue curve  $P_1L_1$  shows the less profit than normal. Here, is no level of output equals to average cost or price. And if the equilibrium is above the PL level as in  $P_2L_2$ , it is

### **PERFECT COMPETITION / 3**

possible for average cost to equal price (in case of W). But at this point the firm can't be in equilibrium. As it cannot produce the expand output in short run. On the other hand when this firm raises its own average cost by moving up its AC curve, the new firms will take away some of the possible customers. The condition to make equilibrium/to make equilibrium is at the point Q.

$$MR = MC$$

With the average revenue curve,  $P_2L_2$ , this will happen when the firm produces  $QM_2$  and sells it at  $OP_2$ . At this point the firm will be earning 'Supernormal profits' equal to the area  $P_2QST$ . This again will be the signal for other firms into the market.

### **Short Run Equilibrium**

Short run is defined as the time period by which the firm can change its output with the existing factors without changing the fixed factors. Only the variable factors can be altered. By employing extra units of labour or with extra shifts. Output can be increased. In the short run, no new firm can enter the industry and no existing firm can leave the industry. The firm will be in equilibrium when MR = MC and MC cuts MR from below: At this level only the firm will earn maximum profits.

When discussing about the short run equilibrium, cost conditions must be considered. If the cost changes to the firm, its impact must be on the whole industry and its equilibrium. So we shall see the short run equilibrium of the firm and of the industry in the following three conditions.

- (i) We shall assume that all the factors of production including entrepreneurship are homogeneous. This means that all the firms are using the same combination of factors when they are producing the same products in factors when they are producing the same products. In conclusion all the firms have identical cost curves.
- (ii) When we assume that all the products except entrepreneurship are homogeneous, cost will differ because of the expertise of the some entrepreneurs.

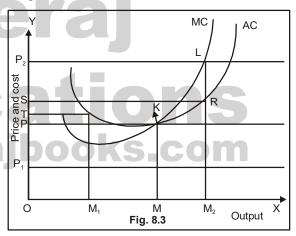
In a situation, where entrepreneurs are not identical in efficiency, some entrepreneurs will be able to produce more efficiently than the others and their cost of production will be lower. Let us assume there are four firms in an industry. Firm A has the most efficient entrepreneur. When producing the output at

given prices, at supernormal profits. Firm B with somewhat less efficient entrepreneur earns only normal profits, in the similar circumstances. Firm C is covering the variable cost. The losses are minimized by the firm C by going on the production in hort run. Firm D has the least efficient entrepreneur. This firm is unable to cover even its variable cost and thus minimizes its losses by closing down in short run.

(iii) When all factors are heterogeneous, the cost difference between the firms is because of the factors of greater efficiency. We can explain short rub equilibrium graphically. There are here main possible positions.

### **Super Normal Profits in the Firm**

The Market Price (OP) is determined by the intersection of the market demand and supply curve as a whole. This is shown in the figure below: The firms take this price as given. P=AR=MR (given) is horizontal straight line.



SAC is the short run average cost curve and SMC is the short run marginal cost curve. Cost curve is 'U' shaped. 'T' is the equilibrium point. Which shows the output level OM and price OP. this firm is earning the total revenue RSTP, this is the super normal profit. In short run if P<sub>1</sub>>p, then the firm is earning extra profit.

Profit = total revenue-total cost

= price × quantity – cost of production

### **Normal Profit in the Short Run**

Market price OP is determined and the firm takes the price. SMC cuts MR at pint 'T'. the output level is OM of the firm.

The firms total revenue = price per unit × equilibrium output

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The firm is earning just normal profit because they are just covering just their normal cost.

### **Losses in the Short Run**

Losses may happen in the short run. This happens when the firms cannot cover the full average cost of production. In cases of losses, the firm tries to reduce them to minimum the firm continues to produce only when it is able to cover its variable cost of production.

The market price OP is determined by the demand and the supply curve. Short run average variable cost is below the short run average cost curve. The price is greater than SAVC but less than SAC. Reaching the given market price OP, the firm gets the equilibrium point 'T' where SMC = MR the firms produce an output of OM the firms bears a loss of PKTR. To produce OM units the firms cost is OKPM. The total cost is greater than the total revenue. The firm incurs a total loss of PKTR.

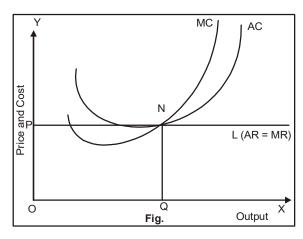
Profit/loss = total revenue – total cost of production
In short run, the firm cannot change or alter its fixed assets as it influences the entrepreneur and other firms.
The firm will continue in short run and would not close down till it can cover its variable costs.

### Long Run Equilibrium

In the long run, there are no restrictions on entry or exit of the firms from the market. All the factors can be changed or altered. Long period is thus long enough to allow supply. To adjust itself to any change in the demand.

When the firms in the competitive industry are in a position of earning more than normal profits, new firm will enter the market. This will increase the supply and shift the supply curve to the right with no change in demand, the prices will fall. The falling prices will continue until all the firms cover their total costs or are at zero-profit equilibrium.

If the firms are in losses, some firms may exit from the market. The supply curve will shift to the left. If there is no change in demand, the price will rise. The continuous exit of firms and rise in prices will stand the firms in a position to cover their costs until they start normal profit. The equilibrium of the firm in long run is shown graphically in the figure ahead. This is a situation of normal profits.



### NORMAL PRICE

Marshall defined normal prices in economics as those prices which may reasonably be expected to prevail in give conditions of demand and supply. The important factor is time. In short run where there is a different price may change into normal in the long run. As long run has changes in factors all the time the equilibrium changes its positions before the time has to be established.

### ECONOMIES AND DISECONOMIES OF PRODUCTION

External economies are not generated by the firm due to its cost effecient techniques. These benefits accrue to the firm because of the growth of the industry as a whole. External diseconomies are the disadvantages which are suffered by a firm because of the inefficiency of the whole industry.

### SUPPLY CURVE OF THE PERFECTLY COMPETITIVE INDUSTRY

Supply curve in the perfect competition have different shapes it depends upon the production conditions. When all the factors of production are homogeneous and are in perfectly elastic supply we consider it as there is perfect competition in the market. In this situation the prices will also be the same in the market. We shall discuss the supply curve in two situations:

- (a) Long Run: Where there is no limit of the firms and scales of production are not fixed.
- **(b) Short Run:** Where the number of the firms is limited also the scales of productions is also fixed

Because factors of all the firms are homogeneous the costs curves are also identical.