

PRICE DISCRIMINATION

- Price discrimination = charging different prices to different consumers of a good or service although the good is similar

➤ 3 BROAD FORMS OF PRICE DISCRIMINATION :

- 1. First – degree price discrimination
 - * Ideally a firm would like to charge each customer a different price.
 - * This would entail the firm charging the customer the maximum price that consumer will be able and willing to pay
 - * This maximum price is known as the **RESERVATION PRICE**.
 - * This practice of charging each customer the reservation price is known as **FIRST – DEGREE PRICE DISCRIMINATION**

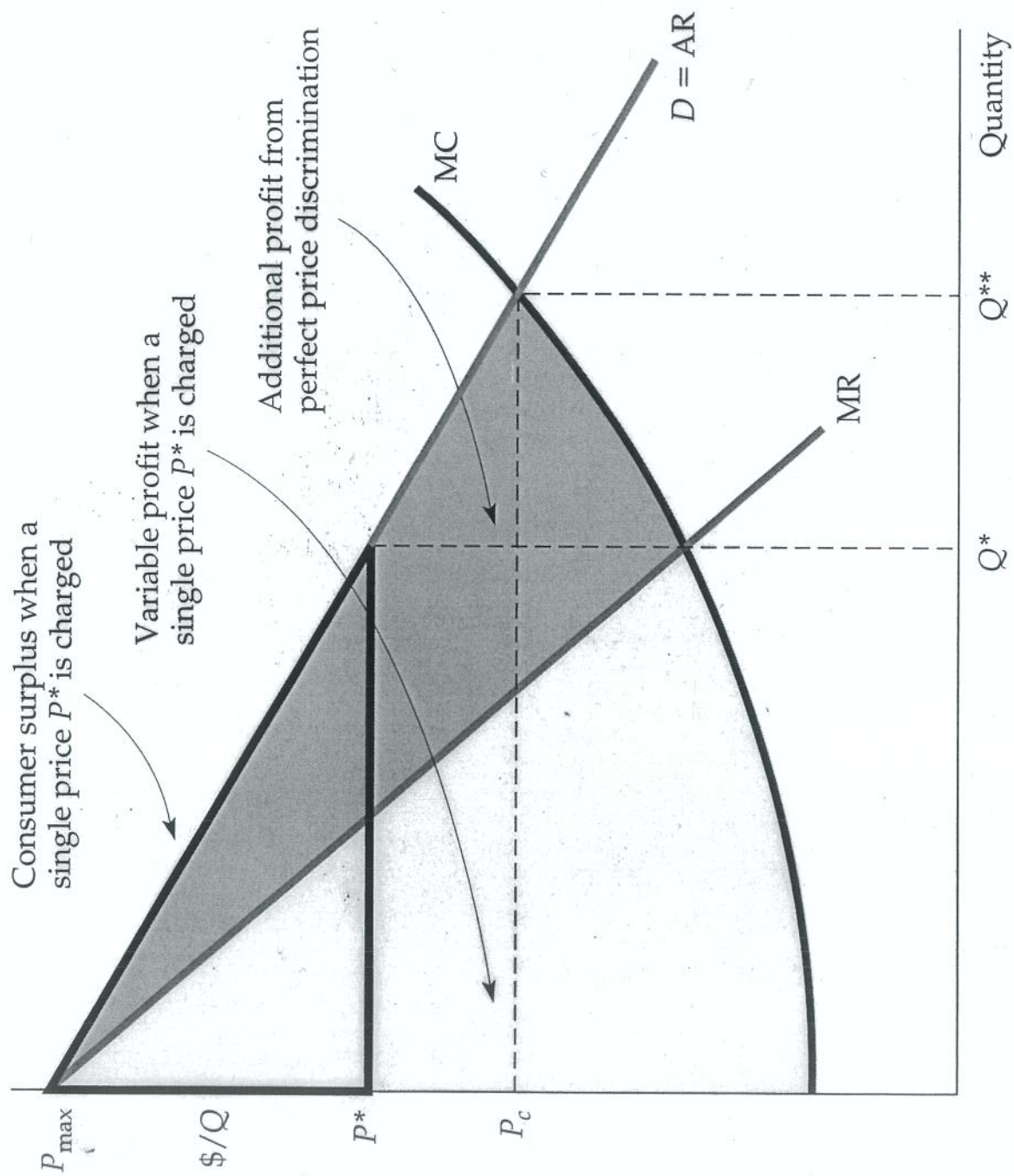
• HOW FIRST –DEGREE PRICE DISCRIMINATION AFFECTS A FIRM'S PROFIT.

- * The firm will earn variable profit = the sum of profits on each incremental unit produced by a firm ie. Profit ignoring fixed costs.
- * Explanation : refer Pindyck Fig. 11.2 p 384
 - The firm earns profit when it charges the price P^*
 - This firm will add the profit on each incremental unit produced and sold up to the quantity Q^*

- This incremental profit is the $MR - MC$ for each unit
- The MR is highest and the MC lowest for the first unit
- For each additional unit, MR falls and MC increases
- Thus the firm produces total output Q^* where $MR = MC$

- * In the graph variable profit is the areas between $MR + MC$ curves
- * Consumer surplus is the area between AR and price of P^* (the triangle $P^m P^*$)

T-191 Figure 11.2



➤ PERFECT PRICE DISCRIMINATION

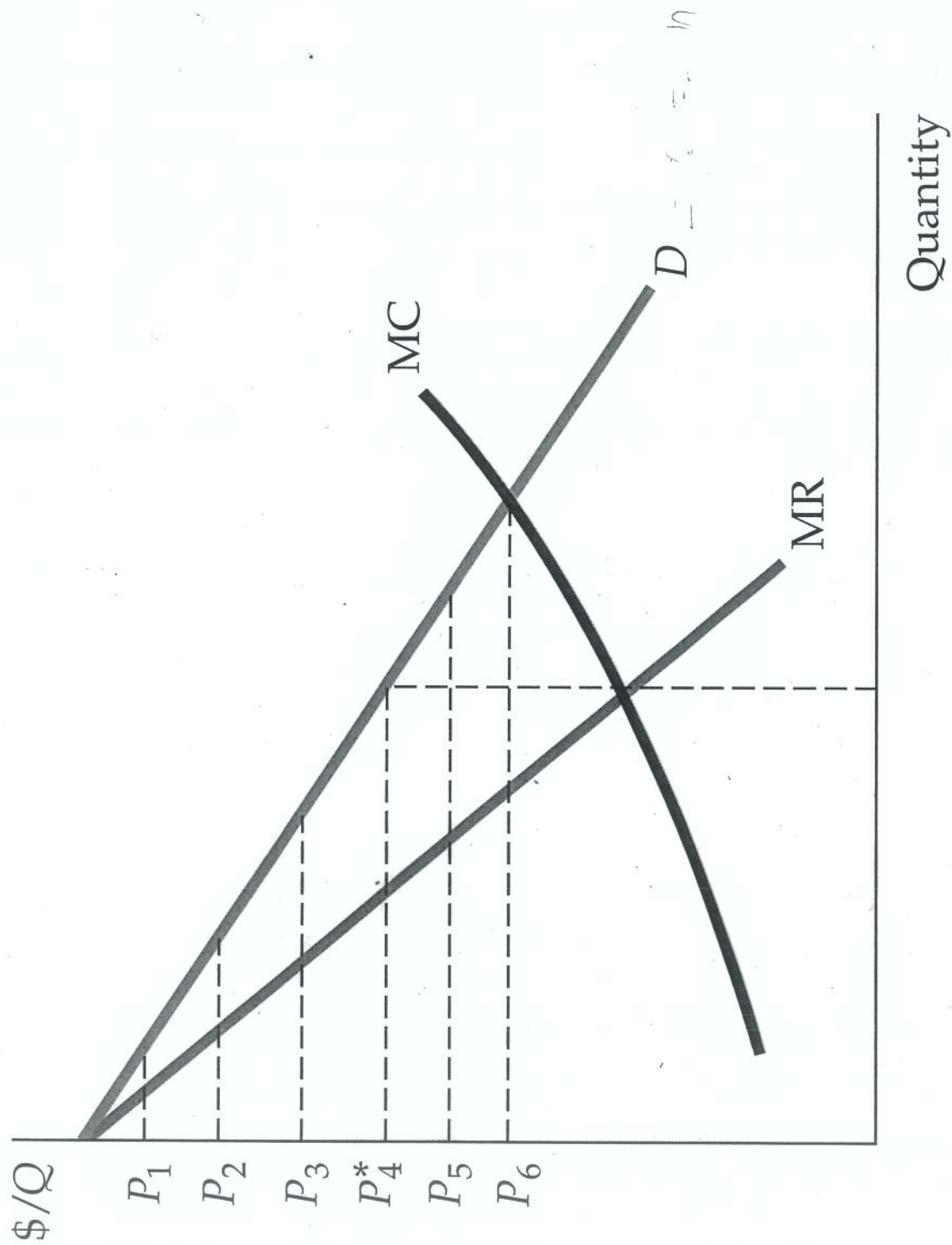
Question :

What happens when a firm can perfectly price discriminate?

Answer :

- Since each consumer is charged what he/she is willing to pay, the MR – curve is not relevant
 - The incremental revenue earned from each additional unit sold is the supply price for that unit, which is given by the demand curve.
 - The price discrimination does not affect the firm's costs, the cost of each additional unit is the firm's MC – curve.
 - Thus the firm's additional profit from producing and selling an incremental unit is the difference between D and MC.
 - As long as $D > MC$ the firm can increase profits by expanding production.
 - It will expand until it produces total output of Q^* where $D = MC$ and if producing more will reduce profits.
 - Variable profit will be the area between D and MC – cost curves.
- In reality perfect price discrimination hardly occurs because :
 1. It is impossible to charge each consumer a different price
 2. A firm does not know the reservation price of each consumer
 3. Consumers will probably not truthfully reveal their reservation price

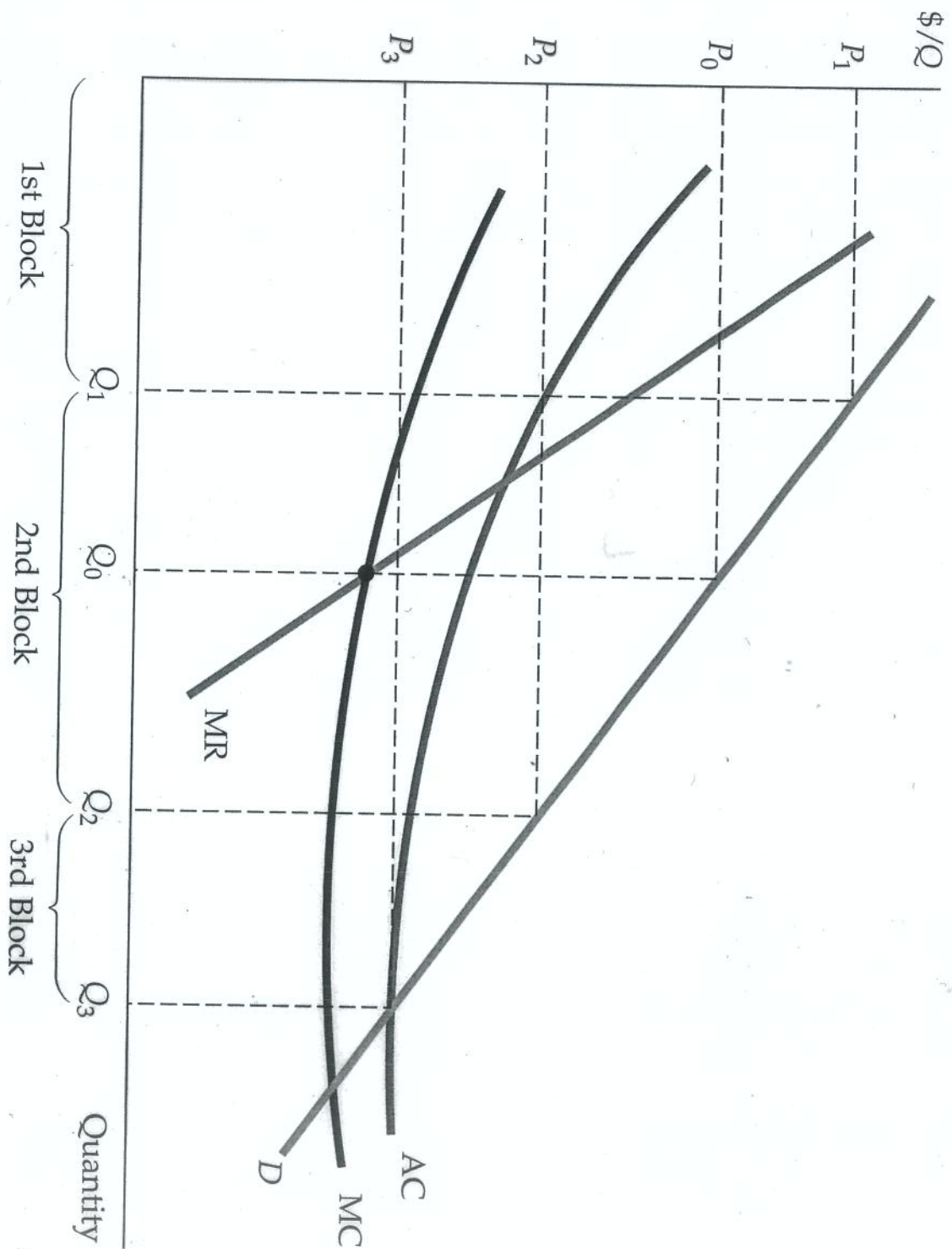
T-192 Figure 11.3



➤ Imperfect Price Discrimination :

- Sometimes firms can discriminate imperfectly by charging different prices based on the customers' reservation prices.
- Example : An accountant who completes the tax returns of clients charges clients different fees based on the income each has earned.
- Fig 11.3.
 - If a single price was charged it would be P_4
 - Six different prices are charged the lowest price is P_6 ¹ is set where MC intersects the D- curve.
 - These buyers would not have been willing to pay P_4 .
 - The consumers may be better off in this situation – they are now in the market and enjoying some consumer surplus.
 - If price discrimination brings enough new customers into the market both the producers and consumers will be better off and consumer welfare will increase.

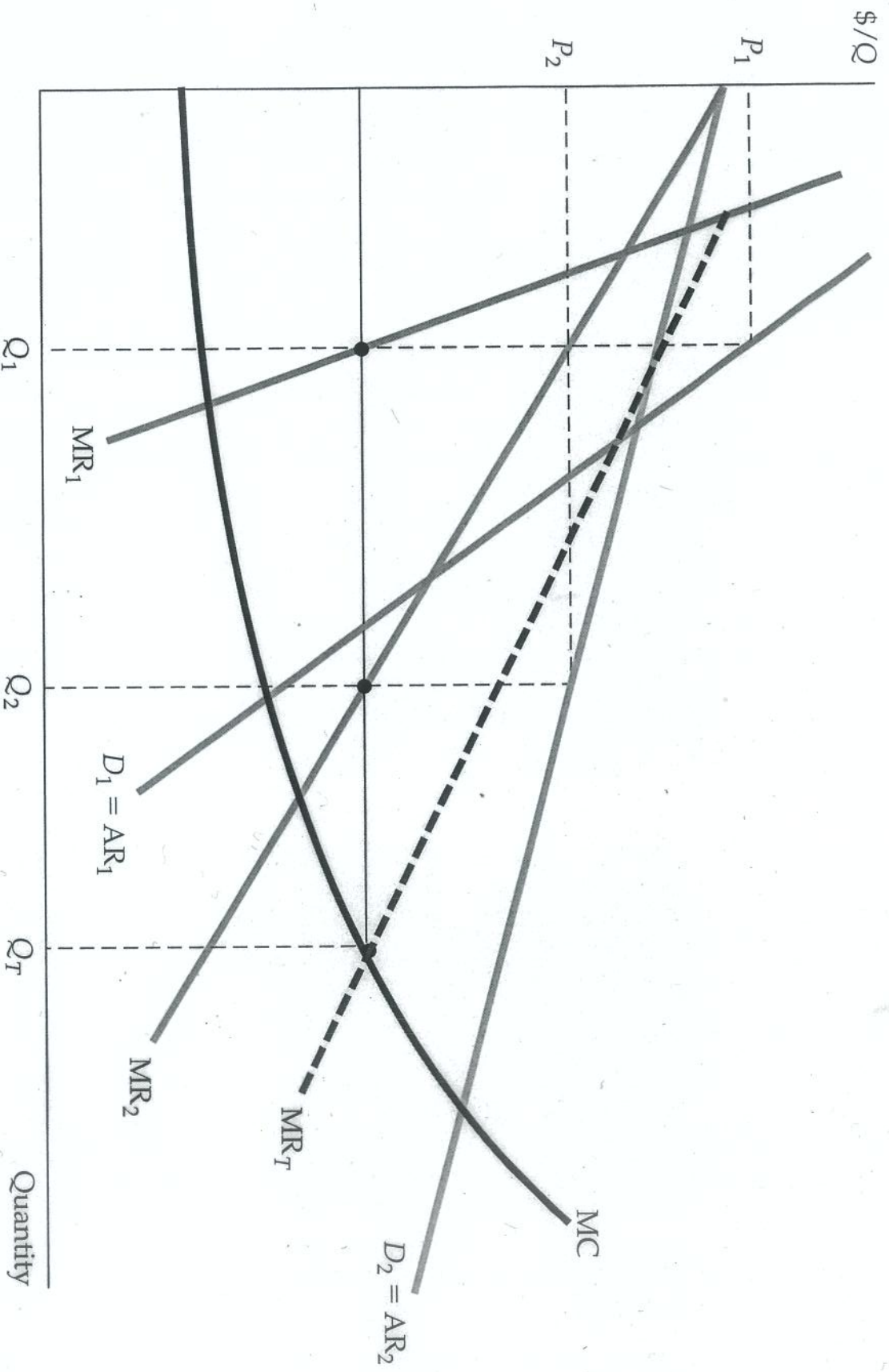
T-193 Figure 11.4



➤ SECOND DEGREE PRICE DISCRIMINATION

- The practice of charging different prices per unit for different quantities of the same good or service
- **Example :** a household who uses electricity may be charged different rates for different units used.
- This system is based on the assumption that a consumer's willingness to pay declines with the use of more units of a good.
- The first 100 kilowatt – hours of electricity are more valuable for a household than subsequent units thus the household will pay more for the first 100 kilowatt – hours than for units used thereafter.
- Block pricing is the practice of charging different prices for different quantities or 'blocks' of a good.
- If economies of scale cause AC and MC to decrease, the government agency that controls rates may encourage block pricing.
- Such block pricing will lead to greater output and bigger economies of scale and thus increase consumer welfare.
- The service provider will realize a greater profit because of the savings from lower unit costs.
- Refer to Fig 11.4

T-194 Figure 11.5



➤ **THIRD DEGREE PRICE DISCRIMINATION**

- The practice of dividing consumers into two or more groups with separate demand curves and charging different prices to each group.
- Refer to Fig. 11.5
- The optimal prices and quantities are such that the MR from each group is the same and equal to MC.
- For Group I with the D – curve of D_1 the price charged is P_1 .
- For Group II with more elastic demand of D_2 , there is a lower price of P_2 .
- MC depends on the quantity produced of Q_T
- Note : Q_1 and Q_2 are chosen so that $MR_1 = MR_2 = MC$

➤ **Inter-temporal Price discrimination.**

- The practice of separating consumers with different demand functions into different groups by charging different prices at different points in time.
- Consumers are divided into high –demand and low-demand groups and charging a high price initially and a lower price thereafter
- DVD players fetched higher prices in the 1990's than now.

➤ **Peak-loading pricing**

- The practice of charging higher prices during peak periods when capacity constraints cause marginal costs to be high.

- The objective is to charge consumers a price that is close to MC.
- For some goods or services the demand will be higher at certain times.
- **Example :**
- Electricity demand is higher from the late afternoon to early evening for domestic users who are preparing evening meals.
- Tariffs are adjusted upwards during these hours eg. 16h00 to 20h00.

T-205 Figure 11.13

