

## TUTORIAL 11

### MONOPOLY & MONOPOLISTIC

1. A Monopoly firm faces the following cost curve:  $C(Q) = Q^2 + 12$ , where  $Q$  is the output produced. The demand for its product is given by  $P = 24 - Q$ .

i) Find the equilibrium price and quantity ( **$P=18$ ,  $Q=6$** )

ii) Find the profit level and Consumer Surplus associated to the monopoly (**Profit=60, CS=18**)

2. Hawkins Micro Brewery has a monopoly on Oatmeal Stout in the local market. The demand is:  $Q = 100 - 2P$ . Hawkins marginal cost of producing Oatmeal Stout is  $MC = 5 + 0.5Q$ . Calculate Hawkins profit maximizing output. Calculate the social cost of Hawkins monopoly power. ( **$Q=30$ , Society Loss=112.50**)

3. Suppose perfectly competitive industry produce breads at a constant marginal cost of Rs 10 per bread. Once the industry is monopolized, the marginal cost rises to Rs 12 per bread. Suppose the market demand for breads is given by the following equation:  $Q=1000-50P$ . Calculate:

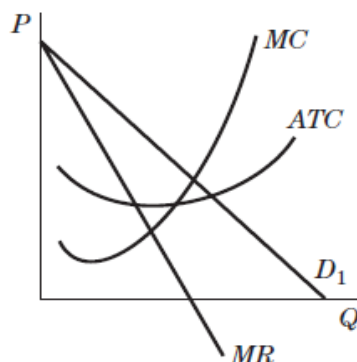
(a) Perfectly competitive and monopoly output and prices ( **$P_{pc}=10$ ,  $Q_{pc}=500$ ,  $P_m=16$ ,  $Q_m=200$** )

(b) The total loss of consumer surplus under monopolization of bread industry (**2100**)

(c) Dead Weight Loss (**1300**)

4. Suppose demand curve  $DD$  facing a firm working under monopolistic competition is given by  $P=36-2Q$  and firm's Long run average cost  $Q^2-18Q+100$ . What is the long run equilibrium price & output of the individual firm? Would the firm earn any profit in long run? ( **$Q=8$ ,  $P=20$ , Profit=0**)

5. The following graph shows a firm in a monopolistically competitive industry.



- Show the firm's short-run profit-maximizing quantity and price. Is the firm making a profit?
- Carefully explain what will happen in the industry over time, and draw a graph of a monopolistically competitive firm in long-run equilibrium.