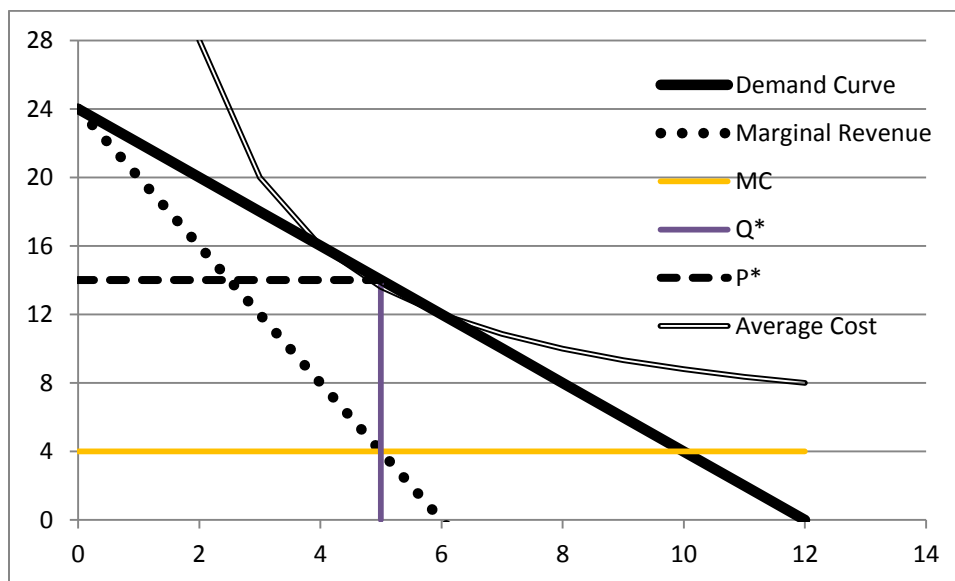


Practice Questions for Midterm 3

1. Suppose that a monopolist has a marginal cost of \$4, and a fixed cost of \$48. Suppose also that the demand curve is given by $Q = 12 - (P/2)$.

The situation in this problem is summarized in the following diagram



1. What is the marginal revenue of the monopolist as a function of Q ? $MR = 24 - 4Q$
2. What is the profit maximizing price and quantity for the monopolist?
 $MR = MC \Rightarrow Q^* = 5, P^* = 14$
3. What is the efficient price? $P = MC \Rightarrow P = 4$ (at $Q = 10$)
4. What is the deadweight loss from the monopolist's maximizing profits? 25

5. What are the monopolist's profits at the profit maximizing price?

$$TR - TC = 5 \times 14 - 48 - 5 \times 4 = 2$$

6. If a regulator forces the monopolist to set a price that generates 0 profits, what are potential prices the monopolist could charge?

$$\pi = 0 \Rightarrow P = \text{Average Cost} \Rightarrow P = 12 \text{ or } 16 \text{ (see figure)}$$

7. If the monopolist can perfectly price discriminate what are his profits then? 52

8. What is consumer surplus with perfect price discrimination? 0

9. Suppose that the Government tries to extract some of the monopoly profits by a tax of \$4 per unit sold. How much of the tax is paid by consumers? What is the deadweight loss from the tax?

Now for the monopolist, $MC = 8$, so $Q^* = 4$, $P^* = 16$. Half tax paid by consumers. $DWL = .5 \times 1 \times 2 + 1 \times 10 = 11$ (this will be explained Thursday evening)

10. Suppose instead the government imposes a lump sum profits tax of \$20. What is the effect on prices to consumers in this case? What is the deadweight loss from this tax?

No change to consumer prices since MC the same.
No deadweight loss in the short run (but in the long run the monopolist will leave the market)

11. When you go to the web site Expedia (or Orbitz) to buy a plane ticket one screen asks the following question: “Is the traveler an ADULT, CHILD or SENIOR (65 or older).” Why do children get offered lower prices for airline tickets?

- A. Children are lighter, so imply a lower marginal cost to airlines.
- B. Airlines are legally required to offer lower fares to children
- C. Families with children typically have more elastic demand.
- D. Families with children are typically poorer than people without.
- E. Because families have multiple people the airline gets more profit from being able to sell two or more tickets to them, so offers a discount.

12. Another page on Expedia used to offer a lower fare if the traveler was willing to buy the ticket before the airline or the route or the time of departure on the day specified is revealed. This shows that the airlines are engaging in what type of **price discrimination**?

- A. Perfect price discrimination.
- B. $MR=MC$
- C. Price discrimination through hurdles
- D. Two part tariffs
- E. Market segmentation through observed characteristics

13 If the long run cost function for a firm is $LTC = 9 + 2q + 4q^2$ then this firm exhibits

- A. Increasing returns to scale
- B. Constant returns to scale
- C. Diminishing Returns to Scale
- D. Both A and B
- E. Both A and C

14. In question 13, the firms long run marginal cost is

- A. 2
- B. 4
- C. $2q$
- D. $4q$
- E. $2+8q$

15. In question 13, the firms long run average cost is $(9/q) + 2 + 4q$. This is minimized when Q equals

- A. 0
- B. $3/2$
- C. 2
- D. 4
- E. $9/4$

(set $MC = AC$)

16. What factors would be expected to lead to general increasing returns to scale?

- A. Large setup costs in production
- B. Gains from specialization
- C. The more rapid increase of volume than area when production is scaled up
- D. Gains from market power in purchasing production inputs
- E. All of A, B, C and D

17. We would expect most production activities to exhibit increasing returns to scale just through the physics of production processes. Yet many sectors of the economy remain competitive. The reasons one firm does not dominate almost all production activities include.

- A. The difficulties of getting non-family employees to pursue completely the objectives of the company.
- B. The willingness of people to work for a lower wage when they employ themselves
- C. The taste by consumers for product varieties, which large companies cannot provide
- D. The resistance of consumers to buying from large corporations.
- E. A and B

18. Firms whose technology shows increasing returns to scale have **both decreasing long run marginal costs**, but **increasing short run marginal costs**. This is because

- A. Some production inputs such as capital cannot be increased in the short run.
- B. The principle of diminishing marginal utility operates in the short run.
- C. It is hard to find workers on short notice.
- D. Economic theory often does not explain the real world well.
- E. There are some sunk costs in the short run such as the capital investment.

19. Many US firms earn supernormal rates of return on capital (also called economic profits). If the normal return on industrial capital is 10%, and a firm earns 20% on its capital, this implies stockholders in this firm will earn:

- A. 10%
- B. Between 10 and 20%
- C. 20%
- D. More than 20%
- E. Not enough information to predict.

20. Corporations dominate production in the US, as opposed to partnerships and sole proprietorships. This is puzzling because -

- A. Diminishing returns to scale should keep firms small
- B. Corporations have to pay a lot to top management
- C. Corporations are subject to shareholder control
- D. Corporations do not maximize profits
- E. Corporate profits face double taxation