EC201, Principles of Micro Economics WVU Spring 2024

Study Guide for First Exam

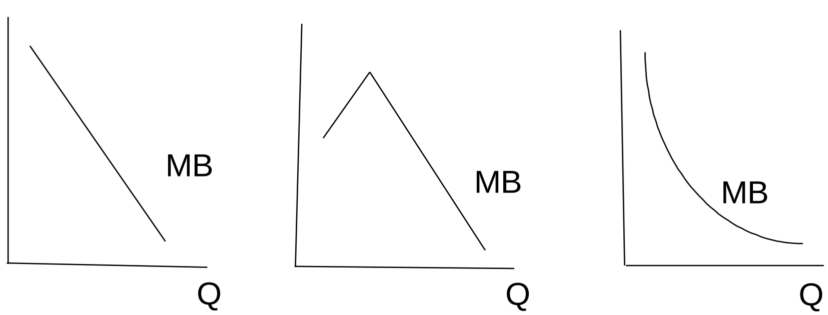
1. Define and discuss briefly the relevance of the following terms (2-3 very clear sentences):

a. net benefit
b. marginal cost
c. consumer surplus
d. average cost
e. supply curve
f. demand curve
g. equilibrium price
h. Marshallian LR supply
i. Ricardian LR supply
j. entry barrier
k. excise tax
l. marginal product
m. marginal revenue product
n. consumer surplus
o. positive statement
p. gains from trade
q. social net benefits
r. marginal revenue product

2. Given the MB curves below, derive the associated demand curves

A. Briefly discuss the method used to derive the demand curves.

B. How are your demand curves different from the MB curves?

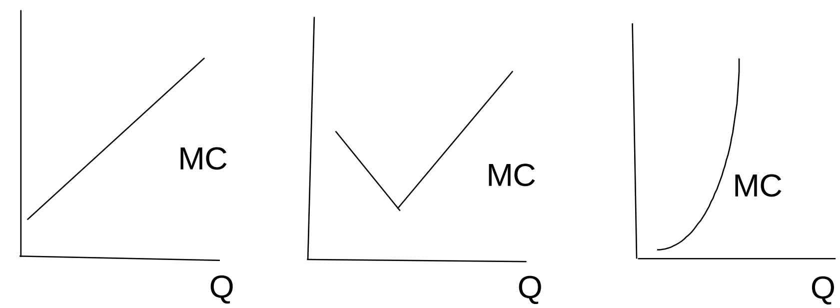


3. Given the MC curves below, derive the associated supply curves.

A. Briefly describe the method used to derive the supply curves.

B. Are these supply curves long run or short run curves? Why?

C. How are your supply curves different from the MC curves?



4. Draw diagrams for three market equilibria, each with downward sloping demand curves and upward sloping supply curves, but with quite different slopes.

A. Show what happens to price and output in each market, if consumer income increases, other things being equal. (Label all important details.)

B. Show what happens to price and output in each market if the cost of labor in this relevant industry increases, other things being equal. (Label all important details.)

C. Show what happens if the price of a substitute for this good falls. (Label all important details.)

D. Show the distribution of profit and consumer surplus at the market equilibrium. Is the equilibrium efficient? In what sense(s)?

E. Briefly discuss what happens to consumer surplus and profits in each case.

F. Briefly explain what these diagrams imply about the mutual gains from trade.

5. Suppose that the market for gasoline is characterized by a nearly perfectly inelastic (almost vertical) supply curve in the short run and a fairly elastic (flatter but upward sloping) Ricardian supply curve in the long run. Suppose also that the demand for gasoline is

more price sensitive in the long run than in the short run, although neither perfectly elastic (flat) nor perfectly inelastic (vertical).

A. Use three diagrams to depict the market equilibrium for gasoline in LR equilibrium. Show: (a) the market equilibrium, (b) the output choice of a typical firm, and (c) the consumption choice of a typical consumer. (Label all important details.)

B. Show the short run and long run effects of a permanent increase in the price of petroleum (a necessary input for the production of gasoline). (Label all important details.)

C. Show the short run and long run effects of a permanent change in consumer tastes which reduces the long run demand for gasoline (as would be the case for if urban living were suddenly considered more desirable or if the "preferred" automobile size suddenly became smaller). (Label all important details.)

6. Construct a table that represents a production function. (Hint the first two columns should be Q inputs and associated Q outputs.)

A. In the next column, calculate the marginal product of the input used in production.

B. In the next column, calculate the average product of the input used in production.

C. In the next column calculate that marginal revenue product, assuming that the output sells for $5.00/unit.

D. In your illustration, what is the highest price that will cause the firm to use (hire) 5 units of the input?

7. Use a marginal revenue product curve to derive a firm's demand curve for labor. Label all details and briefly explain your method.

A. Assume that the price of the output increases. Show what happens to the firm's demand curve for labor. (Label all important details.)

B. Assume that a technological innovation increases the marginal product of labor in all applications within the firm. What happens to the firm's demand for labor? (Label all important details.)

C. Draw a market supply and demand curve, then show the division of net benefits for firms and workers, given the above. (Label all important details.)

8. Suppose that a new public policy mandates that everyone purchase a minimum level of health care.

A. Show the effect on the market for health care. (Label all important details.)

B. Show the effects on the demand for doctors and their income. (Label all important details.)

9. Suppose that the market for doughnuts is characterized by an almost perfectly inelastic supply curve in the short run and a perfectly elastic (flat) Marshallian supply curve in the long run. Assume that the demand for doughnuts is more elastic (more price sensitive) in the long run than in the short run.

A. Use three diagrams to depict the market for doughnuts in LR equilibrium" (a) the market equilibrium, (b) the output choice of a typical firm, and (c) the consumption choice of a consumer. (Label all important details.)

B. Show the short run and long run effects of a permanent increase in consumer income on the market equilibrium. Label all relevant details.

C. Briefly discuss the main difference between a Marshallian and Ricardian market in long run equilibrium.

10. Suppose that a city imposes price controls on the market for rental housing. Use supply and demand curves to depict the effects of that policy on the market for rental housing. Label all important details.

11. Suppose that an excise tax is imposed on the market for doughnuts. Show the effects of that tax on consumers and firms in that market. Label all important details, including the deadweight loss from the tax.

12. Suppose that an entry barrier is imposed on the market for hair stylists. Suppose that current hair stylists are "grand fathered in" (do not have to attend hair styling school) but all new stylists have to attend a year of hair-styling school to gain a license. (a) Show the effect on the short and long run supply of hair stylists. (b) Show how the market response to an increase in demand for hair cuts

would affect hairstylist income in the two cases (with and without the entry barrier). Label all important details.

13. Adam once wrote: “It is not from the benevolence of the butcher the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity, but to their self-love, and never talk to them of our own necessities, but of their advantages. Nobody but a beggar chooses to depend chiefly upon the benevolence of his fellow-citizens. Even a beggar does not depend upon it entirely.”

A. In what ways are the models of supply and demand developed in the first half of this course consistent with Smith’s description of self interest in markets?

B. In what ways are Smith’s comments consistent with your own dealings in markets? Are there any exceptions to that perspective in your experience?