

Cooleconomics.com**Final Exam****You have 2.5 hours to complete the 200-point closed-notes, closed-book exam.**

1. In the long run, widgets may be produced at constant marginal cost of \$5. Market demand for widgets is $Q = 1000 - 20P$. Calculate:

a) equilibrium price, quantity, and profits if the widget market is *perfectly competitive*:

price _____ quantity _____ profits _____

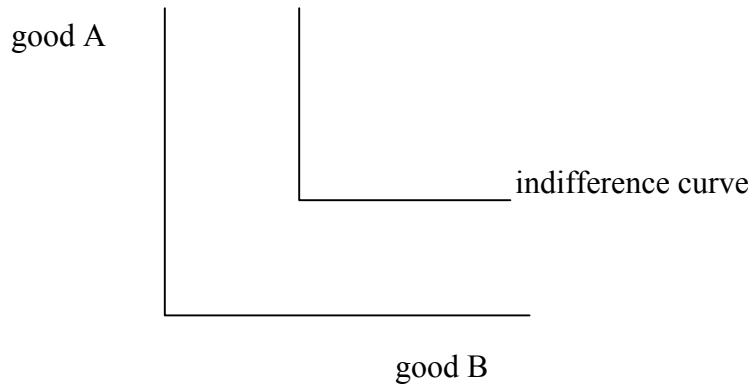
b) equilibrium price, quantity, and profits if the widget market is a *monopoly* (no price discrimination):

price _____ quantity _____ profits _____

c) deadweight loss (if any) of the perfectly competitive outcome, and deadweight loss (if any) of the monopoly outcome:

perfect competition deadweight loss _____ monopoly deadweight loss _____

2. Spielberg's indifference curves for good A and good B have an "L" shape, like this:



Economist Siskel thinks that good A is "hamburgers" and good B is "hot dogs."
 Economist Ebert thinks that good A is "left shoes" and good B is "right shoes."

a) Who is more likely to be correct—Siskel or Ebert? Clearly explain. (Unacceptable answer: neither one)

b) Which demand equation (i)-(iv) is most likely to be Spielberg's demand for good A? Clearly explain. (Unacceptable answer: none of these)

(i) $Q = 10$

(ii) $Q = P$

(iii) $Q = 100 - 5P$

(iv) $P = 10$

3. You are Alan Greenspan, Chairman of the U.S. Federal Reserve System. You believe that the economy is currently operating above its long run potential level. Then, the Congress and the President pass a huge income tax reduction.

a) What is your short run forecast for the change in inflation and unemployment (i.e. will each be *higher* or *lower*) resulting from the tax cut? Fully explain your forecasts.

change in inflation _____ change in unemployment _____

explanation:

b) What is your likely monetary policy response to the tax cut? Justify your response by expounding on its important short run effects below:

c) What is the likely change in Investment resulting from your monetary policy response? Fully explain below:

4. Rodney's company produces biscuits at a constant cost of \$2 each. The company has 2 groups of buyers—rich with demand $Q_{\text{rich}} = 1000 - P$, and poor with demand $Q_{\text{poor}} = 1000 - 2P$.

a) Calculate profit-maximizing price, quantity, and profits, assuming that it is illegal/impossible to segregate the two groups of buyers.

price _____ quantity _____ profits _____

b) Calculate profit-maximizing price, quantity, and profits, assuming that it is legal/possible to segregate the two groups of buyers.

rich price _____ rich quantity _____

poor price _____ poor quantity _____

profits _____

5. Proponents of a national sales tax (to replace the Federal income and F.I.C.A. tax) abound.

a) Using the long term growth model developed in class, discuss the effects of the national sales tax (replacing the current Federal tax system) on long term economic growth. (Be as specific as possible; BS answers will receive no credit.)

b) Using the business cycle model developed in class, discuss the short run effects of the national sales tax (replacing the current Federal tax system) on inflation and unemployment. (Be as specific as possible; BS answers will receive no credit.)

6. The only two gas stations in town are trying to decide what price to charge for a gallon of gas. The payoff matrix below shows the expected profits (in \$thousands). Both gas station owners are aware of this matrix.

		gas station A		
		charge \$1	charge \$1.10	charge \$1.20
gas station B	charge \$1	20,20	35,15	49,10
	charge \$1.10	18,22	30,30	44,20
	charge \$1.20	16,25	25,35	40,40

a) Does either gas station have a dominant strategy? Fully explain.

b) If collusion is illegal, then is there a Nash equilibrium? Fully explain.

c) If collusion is legal, then is there a Nash equilibrium? Fully explain.

7. You are CEO of Ace Widget Co. You are certain that the price elasticity of demand for your product is $1/2$. Your chief economist tells you to increase your product's price. Do you follow his advice, or do you fire him? (Unacceptable answer: not enough information.) Fully explain.

8. Complete the following table:

<u>Q</u>	<u>TFC</u>	<u>TVC</u>	<u>TC</u>	<u>MC</u>
0	_____	_____	_____	--
1	20	_____	_____	5

TFC is total fixed cost; TVC is total variable cost; TC is total cost;
MC is marginal cost