Directions: Answers to the True/False and Multiple Choice questions are not graded, but should be turned in on the scantron form. **Answers to the written work will be graded and so, of course, need to be turned in.** This is your best prep for the exam, so give it your best shot. If you have questions about problems, by all means ask me. I get paid to answer your questions.

**True/False**

1) If both supply and demand both increase, then the equilibrium quantity will definitely increase.

2) By virtue of government controls, command economies can ensure productive efficiency. Market economies have no mechanism to promote such efficiency.

3) Even if two individuals go to the movies at the same time and pay the same price, they will probably not have the same opportunity cost.

4) The demand curve for Good X shifts to the right whenever there is an decrease in the price of Good X.

5) In the absence of trade, a country’s PPF determines both what it can produce and what it can consume.

6) If 2 variables are positively correlated we can say that an increase in one causes an increase in the other.

7) If a country is producing on its PPF, we can say that it is allocatively efficient.

8) An increase in production costs will shift the demand curve to the left.

9) If both supply and demand both increase, then the equilibrium price will definitely increase.

10) An economy will be allocatively efficient as long as it produces on its PPF.

11) Scarcity leads to a concave PPF.

12) A “change in quantity demanded” occurs whenever the price of a substitute good increases or decreases.

13) A price floor must be placed below the equilibrium price in order to be "effective".
14) In a market transaction, gains by one party are offset by losses to the other party.

15) When generating theories from observed data, you engage in the process of deduction.

16) "A decrease in homework should improve faculty evaluation scores." This is a positive statement.

17) An effective price floor is normally accompanied by a shortage.

18) A stable equilibrium is one that cannot be disturbed.

19) The opportunity cost of any decision is the value of the next best alternative that is not chosen.

20) Removing a tax on sugar will likely push the demand curve for candy bars out to the right.

MULTIPLE CHOICE Select the best answer to each question.

21) In one week, the Wicked Witch can knit 15 sweaters or bake 480 cookies. The opportunity cost per sweater for the Wicked Witch is
   a. $15.
   b. 15 cookies.
   c. 480 cookies.
   d. 32 cookies.
   e. 1/32 of a cookie.

22) If there is a shortage of convenient parking spaces on campus, economists would argue that it is because
   a. there are not enough of these spaces.
   b. the price of these spaces is below equilibrium.
   c. the price of these spaces is above equilibrium.
   d. economists are simply argumentative.

23) An economic model is useful only if it
   a. includes every detail.
   b. makes no unproven assumptions.
   c. is mathematical, and is expressed in equations.
   d. makes accurate predictions.
   e. is simple enough to be understood by a child.
24) Ramon earns $20 an hour, Sam earns $30 an hour, Evan earns $40 an hour, and Tabitha earns $50 an hour. The “price of friendship” is likely highest for which person?
   a. Ramon
   b. Sam
   c. Evan
   d. Tabitha

25) If good B is a substitute for good A, then a drop in the price of B
   a. will cause the demand for B to increase
   b. increases the quantity demanded of A
   c. increases the demand for A
   d. decreases the demand for A
   e. decreases the quantity demanded of A

26) Examine the PPF in Figure A. Which of the following statements about this figure is not true?
   a. The opportunity cost of an additional unit of consumption goods decreases as you move to the right along the frontier.
   b. An economy producing at point A is more likely to experience a shrinking PPF in the future than an economy producing at point B.
   c. Both points A and B represent economies achieving productive efficiency.
   d. A move from C to A involves zero opportunity cost.

27) Accords and Sonatas are substitutes. If the price of Accords falls, which of the following will happen?
   a. The demand curve for Sonatas will shift to the left.
   b. The demand curve for Accords will shift to the right.
   c. The supply curve for Sonatas will shift to the left.
   d. The supply curve for Accords will shift to the right.
   e. None of the above.
28) If the quantity demanded for a certain product was relatively responsive to a change in price, this would be represented in a supply and demand diagram as
   a. a relatively steep slope for the demand curve.
   b. a relatively flat slope for the demand curve.
   c. large outward shifts in the demand curve in response to a change in price.
   d. small inward shifts in the demand curve in response to a change in income.

29) In Figure B, the shift in production from A to B is consistent with all but which of the following?
   a. an advance in biochemistry which raises corn yields per unit of land and labor
   b. society's preferences shifting in favor of cotton
   c. previously unemployed workers being put to work
   d. corn farmers receive new and improved equipment

30) Studies at Cornell University indicate that chickens grow 2 percent more weight when a red mitten is placed in their cage and Vivaldi is played in the chicken coop. Estimates of the resulting chicken feed savings are about $60 million a year. How does this show up in the market for chickens?
   a. The price of chickens will rise as more are sold.
   b. The quantity of chickens sold will fall.
   c. The demand curve shifts to the right due to a drop in price.
   d. The supply curve shifts to the right.

31) If the PPF is linear
   a. opportunity costs change as one slides along the frontier.
   b. the opportunity cost of moving along the frontier is zero.
   c. the principle of increasing cost holds.
   d. specialization of inputs is present.
   e. none of the above is true.
32) Generally speaking, the PPF does not give us information about which of the following.
   a. Efficiency
   b. Prices
   c. Opportunity costs
   d. Input specialization

33) We observe that the price of food rises while the quantity purchased falls. This means the
   a. supply curve shifted to the left.
   b. demand curve shifted to the left.
   c. demand curve shifted to the right.
   d. supply curve shifted to the right.

34) Saccharin and aspartame are both low-calorie substitutes for sugar. If saccharin is found to be a cause of cancer,
   a. the price of aspartame will increase
   b. the price of sugar will decrease
   c. the price of saccharin will increase
   d. the demand curves for aspartame and sugar will shift leftward
   e. aspartame and sugar will be complements

35) A minimum wage that is set below the equilibrium wage rate will:
   a. lead to higher wages for some individuals.
   b. lead to lower levels of employment as employers find it more expensive to hire workers.
   c. lead to higher levels of employment as more workers are enticed into the labor market by this new wage.
   d. do nothing whatsoever.

36) Suppose Mathilda is considering producing a new product. After doing some market research she suspects that the supply curve for this good will intersect the vertical axis above the demand curve. If this is the case, which of the following will hold?
   a. The market price of this good will be quite high.
   b. A shortage of this good will occur.
   c. None of this good will be produced or sold.
   d. A surplus of this good will occur.
   e. none of the above.
37) Samsung sold more cell phones in 2010 than it sold five years earlier, but revenues are 18 percent less. Revenue = P x Q. Which graph in Figure C is consistent with this set of facts?
   a. 1
   b. 2
   c. 3
   d. 4

38) A tax is placed on the seller of a good. The tax has the effect of shifting the
   a. demand curve to the right.
   b. supply curve to the right.
   c. demand curve to the left.
   d. supply curve to the left.
   e. either b or c.

39) If you ignore extraneous information in order to concentrate on the problem at hand, you are engaged in the process of
   a. induction.
   b. deduction.
   c. reduction.
   d. abstraction.
   e. None of the above

40) Steel workers in the U.S. are constantly arguing for curbs on the volume of imported steel. This in fact is to produce a
   a. leftward shift in the supply curve of American steel.
   b. leftward shift in the demand curve of American steel.
   c. rightward shift in the supply curve of American steel.
   d. rightward shift in the demand curve of American steel.
Short Answer and Graphing Questions

General Directions: The written problems below will be graded. Please read the "Homework Guidelines" handout in the Handout Archive before doing these questions. Failing to follow those guidelines absolutely will cost you points. Also, do not staple the Scantron to your written answers. The Scantron machine really doesn’t like staples.

1) For each of the following, use supply and demand diagrams to illustrate the shift that occurs in the specified market. Be sure to identify the market, label all axes and curves, show the initial and final equilibrium values for price and quantity, and use arrows to indicate the direction of the shift. (Note: all 9 of these graphs could probably be put on two or three sheets of paper if done neatly and carefully.) 18 points

a) Paypal has long, at least in terms of the Internet, been a popular way of paying for goods and services online. Apple has recently introduced an electronic payments system called Apple Pay that promises convenient and secure mobile electronic payments. If Apple Pay can deliver on its promise, show the effect of its introduction on the market for Paypal’s services.

b) Generally speaking, both psychologists and psychiatrists treat patients with mental health issues. The difference, more or less, is that psychiatrists are medical doctors (M.D.s) and are able to write prescriptions. Psychologists are not medical doctors and generally cannot prescribe drugs. They have traditionally been limited to various forms of nonpharmaceutical psychotherapy. Recently, legislation has been proposed that would allow psychologists to prescribe a limited range of drugs to treat patients. Show the effect of this legislation on the market for psychologists.

c) Colchizine, a drug derived from the Autumn Crocus (*Colchicum autumnale*), is a drug used to treat gout, a disease that affects many older Americans. Colchizine is, in fact, a quite ancient drug, and its use predates the formation of the Federal Drug Administration (FDA). That meant that it had never undergone the rigorous testing for safety and efficacy that most pharmaceuticals undergo before being approved for use. Until quite recently, it was produced by a large number of firms. As part of a program to have these legacy drugs tested, the FDA granted URL Pharma a patent in return for doing the testing that the FDA wanted. A patent grants a producer the sole legal right to produce and distribute a good for a period of time. Show the effect of this patent on the market for cholchizine.

d) Harvard plans on admitting 800 students for its 2016 freshman class. Recently Yale and Stanford announced plans to offer double the financial aid packages they offer to all freshmen. Better yet, these financial aid packages will consist solely of grants rather than loans. Ceteris paribus, show the effect of this announcement on the market for admission to Harvard in 2016.

e) Henry imports rubber ducks from China. For all intents and purposes he can import as many as he wants for $1.00 apiece. His customers are usually swim teams who buy ducks from him to hand out as heat winner awards at swim meets. Ribbons are an alternative, and popular, heat winner award. Unfortunately, the dyes used in ribbons have just been discovered to be toxic. Show the effect of this discovery on the market for Henry’s rubber ducks.
f) In order to drive a taxi cab in New York City (NYC), you must have a medallion issued by the city. There are only a fixed number of these medallions available, currently 13,600. By constraining the number of medallions, the city has managed to limit the number of cabs in operation up until now. However, complaints by residents regarding the difficulty of finding the cab have finally convinced the NYC to issue an additional 5,000 medallions. Illustrate the effect of this change on the market for medallions.

g) Uber is a new service that allows individuals to call a car for transportation. Passengers really like the fact that they can schedule rides ahead of time. They also like the fact the cars are often newer and cleaner than cabs. Show the effect of this change on the market for taxi medallions in NYC.

h) Florida has always been a big citrus producer. Tariffs (taxes on imports) have historically kept citrus products from other countries such as Spain out of the U.S. Recently, as part of a free trade agreement, the U.S. has removed these tariffs. Show the effect of this trade agreement on the U.S. market for Florida oranges.

i) Show the effect of the agreement in part (h) on the U.S. market for oranges.

2) Yorick owns two small bakeries in the hamlet where he grew up. Each bakery can produce both scones and Danish. Bakery 1 employs 4 workers, and each worker can produce 20 scones per day or 40 Danish. Bakery 2 employs 6 workers, each of whom can produce 100 scones per day or 60 Danish.

   a) Draw a separate production possibilities frontiers for each of these bakeries.

   b) Calculate the opportunity cost of Danish in Bakery 1 and the opportunity cost of Danish in Bakery 2.

   c) Draw an overall PPF for Yorick's baking empire.

   d) Suppose Yorick wishes to produce 120 Danish per day. How many workers should he assign to Danish production? What is the maximum number of scones he could produce if he produces this quantity of Danish? What is the OC of another Danish at this level of Danish production?

   e) Suppose Yorick now wishes to produce 240 Danish per day. How many workers should he assign to Danish production? What is the maximum number of scones he could produce if he produces this quantity of Danish? What is the OC of another Danish at this level of Danish production? **12 points**