Part I: Multiple Choice (90 points)

Labor Hours Needed to Make 1 Pound of: Pounds produced in 20 hours:

<table>
<thead>
<tr>
<th></th>
<th>Meat</th>
<th>Potatoes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmer</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Rancher</td>
<td>4</td>
<td>1</td>
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</tbody>
</table>

20 hours:

<table>
<thead>
<tr>
<th></th>
<th>Meat</th>
<th>Potatoes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>20</td>
</tr>
</tbody>
</table>

1. Refer to the tables shown. For the Farmer, the opportunity cost of 1 pound of meat is
   a. 1/2 pound of potatoes.
   b. 8 hours of labor.
   c. 4 hours of labor.
   d. 2 pounds of potatoes.

2. The production possibilities frontier is
   a. a map which shows areas of the world in which capitalist production is now possible.
   b. a map which shows the frontier beyond which agriculture is unprofitable.
   c. a graph which shows the various combinations of resources that can be used to produce a given level of output.
   d. a graph that shows the various combinations of output the economy can possibly produce given the available resources and technology.

3. If labor in Mexico is less productive than labor in the U.S. in all areas of production,
   a. Mexico can benefit from trade but the U.S. cannot.
   b. neither nation can benefit from trade.
   c. Mexico will not have a comparative advantage in any good.
   d. both nations can benefit from trade.

4. Causes of market failure include
   a. externalities and foreign competition.
   b. market power and incorrect forecasts of consumer demand.
   c. externalities and market power.
   d. incorrect forecasts of consumer demand and foreign competition.

5. In the circular-flow diagram shown, which arrow shows the flow of goods and services?
   a. A
   b. B
   c. C
   d. D
6. In a circular-flow diagram,
   a. taxes flow from households to firms, and transfer payments flow from firms to households.
   b. income payments flow from firms to households, and sales revenue flows from households to firms.
   c. resources flow from households to firms, and goods and services flow from firms to households.
   d. b and c

7. On a downward sloping, linear demand curve, total revenue would be at a maximum
   a. at the lower end of the demand curve.
   b. at the upper end of the demand curve.
   c. It is impossible to tell without knowing the price and quantity demanded.
   d. at the midpoint of the demand curve.

8. The term which means whatever must be given up to obtain an item is
   a. externality.
   b. efficiency.
   c. market failure.
   d. opportunity cost.

9. In the production possibilities frontier shown, the shift of the frontier from A to B was most likely caused by which of the following?
   a. more capital available in the economy
   b. more labor available in the economy
   c. a general technological breakthrough
   d. technological improvement in the production of clothing
10. On the production possibilities frontier shown, the opportunity cost to the economy of getting 10 additional roller blades by moving from point A to point B is

a. 15 bikes.
b. 10 bikes.
c. 5 bikes.
d. It is impossible to know the opportunity cost without knowing the cost of the resources used to produce the additional roller blades.

11. If the price of a substitute to good X increases, then

a. the market price of good X will decrease.
b. the demand for good X will increase.
c. the demand for good X will not change.
d. the demand for good X will decrease.

12. The term market failure refers to

a. an unsuccessful advertising campaign.
b. a firm which is forced out of business because of losses.
c. a situation in which the market on its own fails to allocate resources efficiently.
d. a situation in which competition among firms becomes ruthless.

13. The scientific method can best be defined as

a. the use of controlled experiments in understanding the way the world works.
b. the use of modern electronic testing equipment in understanding the world.
c. finding evidence to support preconceived theories about how the world works.
d. the dispassionate development and testing of theories about how the world works.

14. Demand for a good would tend to be more elastic,

a. the longer the period of time considered.
b. the greater the availability of complements.
c. the fewer substitutes there are.
d. the broader the definition of the market.

5. Economists understand that people respond to

a. incentives.
b. the wishes of policymakers.
c. tax breaks, but not tax hikes.
d. threats more than rewards.
5. In the graph shown, as price falls from $P_A$ to $P_B$, which demand curve is most elastic?
   
   a. $D_1$
   b. $D_2$
   c. $D_3$
   d. All of the above are equally elastic.

7. Demand is said to be elastic
   
   a. if demand shifts substantially when the price of the good changes.
   b. if the price of the good responds substantially to changes in demand.
   c. if buyers don't respond much to changes in the price of the good.
   d. if the quantity demanded responds substantially to changes in the price of the good.

8. California's drought-emergency water bank
   
   a. causes water to be fixed in supply.
   b. caused a severe water shortage in 1991.
   c. caused the price of water during the last drought to fall.
   d. allows farmers to lease water during dry spells.

9. Which of the following shows the workings of supply and demand?
   
   a. A warm summer in New England results in lower hotel prices in the Caribbean.
   b. A cold snap hits Florida, resulting in higher orange juice prices in supermarkets.
   c. A war breaks out in the Middle East, causing gasoline prices in the United States to rise.
   d. All of the above are correct.
20. Suppose that demand decreases AND supply decreases. What would you expect to occur in the market for the good?
   a. Equilibrium price would increase, but the impact on equilibrium quantity would be ambiguous.
   b. Equilibrium price would decrease, but the impact on equilibrium quantity would be ambiguous.
   c. Both equilibrium price and equilibrium quantity would increase.
   d. Equilibrium quantity would decrease, but the impact on equilibrium price would be ambiguous.

21. Which of the following would NOT be a determinant of demand?
   a. income
   b. the price of related goods
   c. the prices of the inputs used to produce the good
   d. tastes

22. Carolyn decides to spend an additional hour working overtime rather than watching a video with her friends. She earns $8 for her hour's work. Her opportunity cost of working is
   a. the enjoyment she would have received had she watched the video.
   b. the $8 she earns.
   c. nothing, since she would have received less than $8 of enjoyment from the video.
   d. the $8 minus the enjoyment she would have received from watching the video.

23. If the cross-price elasticity of demand is 1.25, then the two goods would be
   a. luxuries.
   b. complements.
   c. substitutes.
   d. normal goods.

24. The movement from point A to point B on the graph shows
   a. a decrease in demand.
   b. an increase in demand.
   c. an increase in quantity demanded.
   d. a decrease in quantity demanded.
25. An externality is
   a. the impact of society's decisions on the well-being of one person.
   b. the impact of society's decisions on the well-being of society.
   c. the impact of a person's actions on that person's well-being.
   d. the impact of one person's actions on the well-being of a bystander.

26. On the graph, the movement from $S$ to $S_1$ is called
   a. a decrease in supply.
   b. an increase in supply.
   c. a decrease in quantity supplied.
   d. an increase in quantity supplied.

27. In the figure shown, which panel(s) best represent(s) a binding rent control in the short run?
   a. panel (a)
   b. panel (b)
   c. neither panel
   d. both panels
28. The term tax incidence refers to
   a. the division of the tax burden between buyers and sellers.
   b. the Boston Tea Party.
   c. the "flat tax" movement.
   d. the division of the tax burden between sales taxes and income taxes.

29. Trade can make everybody better off because it
   a. reduces absolute costs of production.
   b. leads to interdependence.
   c. increases labor costs.
   d. allows people to specialize according to comparative advantage.

<table>
<thead>
<tr>
<th></th>
<th>Cars</th>
<th>Airplanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>40</td>
<td>160</td>
</tr>
<tr>
<td>Japan</td>
<td>50</td>
<td>150</td>
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<tr>
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</tr>
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<tbody>
<tr>
<td>Amount</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td>Produced</td>
<td>48</td>
<td>16</td>
</tr>
</tbody>
</table>

30. Refer to the tables shown. The U.S. has a comparative advantage in ______ and Japan has a comparative advantage in ______.
   a. airplanes, cars
   b. airplanes, airplanes
   c. cars, airplanes
   d. neither good, cars
PART II: PROBLEM SOLVING/SHORT ANSWER

1. Suppose that the demand and supply curves for the market in peanuts are given by the following:

\[ P = \frac{-1}{2} Q_D + 100 \]  
(Demand)

\[ P = \frac{1}{2} Q_s + 20 \]  
(Supply)

a. Carefully graph the supply and demand curves.

b. Find the equilibrium price and quantity.

c. Suppose that peanuts and part of the government's farm price support system. As such, the government sets a price floor for peanuts of $80.00 per unit.

i) Does this price floor cause a shortage or a surplus in the market?

ii) Calculate the exact amount of the shortage or surplus.
2. Elasticity

Let the demand curve for six packs of Coke be the following:

The equation of this demand curve for Coke is \( P = \frac{-1}{10} Q + 7 \)

a. Find the arc price elasticity of demand between \( P = 5 \) and \( P = 4 \).

b. Find the price elasticity of demand when \( p = 3 \).

c. Interpret this elasticity. (In other words, what does it tell you.)
d. Suppose that the price of Pepsi increases, and the cross-price elasticity of demand is 2.3. Describe what happens to the demand for Coke.

e. Suppose that Pepsi starts a new ad campaign and the elasticity between the money spent by Pepsi on the campaign and the quantity demanded for Coke is 1.5. How should Coke respond to Pepsi’s new ad campaign? (Be Coke’s marketing advisor.)
3. Tax Incidence

The market for gasoline is characterized by the following supply and demand curves:

\[ P = -2Q + 15 \quad \text{(Demand)} \]
\[ P = Q \quad \text{(Supply)} \]

In equilibrium \( P = 5, Q = 5 \). Price is price per gallon.

a. Now suppose that the government imposes a new tax on producers of $3.00 per gallon. What is the new equilibrium price?

b. Even though the full $3.00 tax was imposed on producers, how much of the tax was actually paid by producers? Explain.