Section I, Multiple Choice (36 points): Circle the letter in front of the best answer.

1. The opportunity cost of a good, a service, or an activity can be defined as
   a. what you give up divided by what you get.
   b. what you give up divided by what you pay.
   c. what you get divided by what you give up.
   d. what you pay divided by what you give up.

2. Economic growth can occur as a result of
   a. increased quantities of capital equipment.
   b. technological innovation.
   c. improvements in overall educational levels.
   d. all of the above

3. Which of the following statements is true concerning a Production Possibilities Frontier?
   a. The horizontal and vertical intercepts are the ideal production and consumption points.
   b. The horizontal and vertical intercepts indicate the maximum amount of one good that can be produced if there is zero production of the other good.
   c. The horizontal and vertical intercepts are unattainable points.
   d. None of the above

4. If an item is selling at its equilibrium price,
   a. there is an excess supply of the good.
   b. there is an excess demand for the good.
   c. the quantity supplied is equal to the quantity demanded.
   d. producers will raise the price to increase their profits.

5. Beginning from an initial equilibrium condition, when demand decreases
   a. the equilibrium price will increase, but the equilibrium quantity will decrease.
   b. the equilibrium price will decrease, but the equilibrium quantity will increase.
   c. both the equilibrium price and quantity will decrease.
   d. both the equilibrium price and quantity will increase.

6. Which of the following would cause a family’s demand curve for a good to shift to the left?
   a. An increase in the price of a substitute good
   b. An increase in the supply of a complement good
   c. A decrease in household income (if the good were normal)
   d. None of the above

7. An individual is considered to be “in the market” for a good if s/he
   a. can afford the item and will buy it if the price is right.
   b. is at a retail outlet that sells the item.
   c. owns the item but is willing to sell it if she/he can get a good enough price.
   d. (a) and (c)
   e. all of the above

8. One reason why a demand curve reflects a negative relationship between the price and the quantity demanded is that
   a. an increase in the price of a good causes consumers to decrease their purchases of that good and purchase more of a substitute good.
   b. an increase in population decreases demand.
   c. a decrease in the expected future price of a good increases demand in the current period.
   d. an increase in income decreases demand for normal goods.
Section II, Direct Questions (30 points): Answer each of the following questions. You will be graded on your five best responses.

A. On the graph to the right, draw and label a linear Production Possibilities Frontier, with Meat on the horizontal axis and Milk on the vertical axis. Then identify and label an output combination that is efficient, one that is unattainable, and one that is inefficient.

B. Explain in some detail the opportunity cost of a first-semester freshman’s decision to be a full-time student as compared to working a full-time job.

C. On the graph to the right, draw and label a supply-demand diagram that demonstrates a disequilibrium price that results in an excess demand (shortage) situation.

D. If goods A and B are production substitutes, an increase in the price of good A will cause a shift in either the supply of or the demand for B. Which function is shifted, and in which direction (increase or decrease)? Briefly explain your response.
Section III, Problems (30 points)

A. (12 points) The following questions refer to the production possibilities schedule below:

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Possibilities</th>
<th>Education</th>
<th>Medical Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>10</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>20</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>30</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>40</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

1. Graph the production possibilities frontier on the chart.

2. What is the opportunity cost of the second ten units of education? ________________

3. Add point F, at 20 Education, 70 Medical Care. What does this point represent?

4. Why can the economy NOT produce 30 units of education and 100 units of medical care?

5. How does the production possibilities schedule depicted above illustrate the concept of increasing opportunity costs? Be specific.

B. (18 points) The graphs below and on the next page represent the national market for Salties Potato Chips (a Pringles “copycat”). P₀ and Q₀ are the initial supply-demand equilibrium prices and quantities. Six events are listed that affect the Salties Potato Chips market. For each of the events, show the impact of the event graphically. State the impact on the price (Increase, Decrease) and on the quantity transacted (Increase, Decrease). Each case involves a modification of the original graph. Analyze each case independent of the other cases.

1. The International Olympic Committee signs a contract making Salties Potato Chips the “Official Potato Chip of the Olympic Games”.

   Equilibrium Price: I / D
   
   Quantity Transacted: I / D
2. Scientists at Salties Potato Chips develop a new chip manufacturing process that reduces cooking time by fifty percent with only negligible impacts on the taste.

   Equilibrium Price: I / D
   Quantity Transacted: I / D

3. A major potato disease hits Idaho farmers, leading to a thirty percent reduction in the nation’s potato harvest.

   Equilibrium Price: I / D
   Quantity Transacted: I / D

4. A positive link is discovered between a food poisoning epidemic (15,000 ill in California) and consumption of Salties Potato Chips.

   Equilibrium Price: I / D
   Quantity Transacted: I / D

5. Pringles engages in a price war with Salties, lowering the price of Pringles by 20 cents a can.

   Equilibrium Price: I / D
   Quantity Transacted: I / D

6. The federal government authorizes the purchase of potato chips for school snack programs for elementary children.

   Equilibrium Price: I / D
   Quantity Transacted: I / D