A. Direct Questions

1. On a two-dimensional graph, with X measured along the horizontal axis and Y measured along the vertical axis, how would technological improvement in the production of Y be shown on a Production Possibilities Frontier?

   As an upward shift in the vertical intercept, with no change in the horizontal intercept.

2. Suppose that the demand curve and the supply curve for wheat both shift to the right. What will be the impact on the price of wheat and the quantity of wheat sold?

   Quantity transacted will increase. Price will either increase or decrease, depending on the magnitudes of the supply and demand shifts (if demand is greater, price will increase).

3. Economically, what constitutes a shortage of wheat?

   When the quantity demanded of wheat exceeds the quantity supplied at the given price.

4. If demand increases and supply decreases, what would be the impact on the new equilibrium price and the new quantity transacted?

   Price will increase. Quantity transacted will either increase or decrease, depending on the magnitudes of the supply and demand shifts (if demand is greater, quantity will increase).

5. If an increase in the price of one good causes the quantity demanded of another good to decrease, what is the relationship between these two goods?

   They are complements.

6. What are the two reasons given in class as to why the demand curve reflects an inverse relationship between the quantity demanded and the price of the good?

   Substitution effect and income effect

7. With the opening of trade between two countries with unequal no-trade prices, what is the impact on the price, production and consumption in each country?

   Exporting country: price and production will increase, consumption will decrease. Importing country: price and production will decrease, consumption will increase.

8. What is the relationship between opportunity cost and comparative advantage?

   Between two countries, the country with the lower opportunity cost has the comparative advantage.
9. What is “protectionism”, and how does protectionism affect consumers and producers?

Protectionism is the activity of one national government to restrict its imports of goods or services from another country by means of tariffs, quotas, or other means, for the benefit of its domestic producers (PROTECTing its domestic producers from “cheap foreign imports”).

10. What happens to the value of the dollar when ..... ? (a) Japanese businessmen increase their business and pleasure trips to the United States, (b) Indonesian industrialists invest in U.S. mutual funds, and (c) Mexican government finance officials intervene to prop up the peso.

   a) appreciates   b) appreciates   c) depreciates

11. What is the “Euro”, and what impact might the Euro have on international commerce?

The Euro is the new common currency of the European Union. The use of the Euro will decrease the cost of international transactions between members of the European Union, and the Euro could possibly eventually challenge the supremacy of the dollar on foreign exchange markets.

12. What are the mechanisms whereby dollar markets and Deutschmark markets are linked?

   (1) The dollar to Deutschmark exchange rate is the inverse of the Deutschmark to dollar exchange rate, and (2) As U.S. citizens demand Deutschmarks, they are supplying dollars, and vice versa.

13. How do we show increasing opportunity costs associated with increased production along a concave PPF?

   See diagram and text on page 40 of the textbook.

14. In a supply-demand framework, if supply shifts to the right, what is the impact on consumer surplus? ....on producer surplus?

   Price will fall, consumer surplus will increase; producer surplus may increase or decrease, depending on the magnitude of the shift.

15. Using producer and consumer surplus areas, show the impact of imposing a tariff on what had been a freely traded good.

   Textbook, page 409 (quota on page 410)

16. Why do we import manufactured goods from Mexico when we can make them more cheaply within our own borders?

   Comparative advantage.

17. What is the connection between a concave PPF and a supply function?

   A concave PPF exhibits increasing opportunity costs. If we plot those increased costs for additional units of one of the goods we generate a supply function.
18. What is the process whereby a pure “gold standard” is a “self-correcting” mechanism?

As Nation A producers enjoy increased exports, gold flows in to Nation A, prices inflate, Nation A’s products become less competitive, and other nations reduce their purchases of Nation A’s products.

19. How do we show “gains from trade” (gains from specialization and exchange) in a 2-nation, 2-good framework? What are the limits on the “terms of trade”?

It is too difficult for me to try to articulate the diagrammatic exposition. I believe it is twice presented in your notes. The limits on the terms of trade are the opportunity cost ratios for the two countries.

20. How do changes in income, interest rates and inflation affect a country’s currency value?

Income increases: depreciates national currency
Interest rate increases: appreciates national currency
Inflation rate increases: depreciates national currency
Problems:

1. Suppose that on any given day the population on a desert island can expect to either catch fish or gather fruit according to the following schedule:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit</td>
<td>54</td>
<td>50</td>
<td>42</td>
<td>32</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Fish</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

a. With Fish on the horizontal, plot the Production Possibilities Frontier for these data.

I trust you can do this on your own. If not, we’ve got problems......!

b. Calculate the opportunity cost of fish from B to C and from D to E.

\[
OC(\text{fish}) = \frac{-\Delta \text{fruit}}{+\Delta \text{fish}} = \frac{(42-50)}{(4-2)} = -\frac{8 \text{ fruit}}{+2 \text{ fish}} = -4 \text{ fruit for every fish}
\]

c. Calculate the opportunity cost of fruit from point B to point C.

The inverse: -.25 fish for every piece of fruit

2. Imagine a supply-demand diagram depicting the national market for popcorn, with initial equilibrium prices and quantities. Six events are listed that affect the popcorn market. For each of these events, state the impact on the price (Increase, Decrease) and on the quantity transacted (Increase, Decrease). Analyze each case independent of each of the other cases.

a. A severe drought in the Midwest reduces the popcorn harvest by a substantial amount.
   Supply shifts left (decreases), price increases, quantity transacted decreases.

b. Scientists at Duke University discover that buttered popcorn is the leading cause of clogged arteries that lead to major heart attacks.
   Demand shifts left (decreases), price decreases, quantity transacted decreases.

c. Scientists at Purdue University develop a genetically-altered seed variety that increases average popcorn yields by 30 percent.
   Supply shifts right (increases), price decreases, quantity transacted increases.

d. Terrorists around the world destroy twenty percent of the world’s oil refineries.
   Supply shifts left (decreases), price increases, quantity transacted decreases.

e. The federal government introduces a policy of providing popcorn for school snack programs for elementary children.
   Demand shifts right (increases), price increases, quantity transacted increases.

f. An industry forecast is released that suggests increasingly tight supplies and unusually high future prices of popcorn.
   Supply shifts left (decreases) and demand shifts right (increases), price increases, quantity transacted is uncertain (depends on the magnitudes of the shifts).
3. In one hour, Barry can either iron 4 shirts or fold 2 baskets of laundry, while in the same
time, Mary can either iron 5 shirts or fold 7 baskets of laundry. Calculate the opportunity cost of
ironing and folding for each person. HINT: Assume Barry and Mary have four hours each to do
their chores, and draw the (linear) PPF’s for each person.

\[
OC(\text{Barry, folding}) = -4I/2F = -2I/1F \quad OC(\text{Mary, folding}) = -5I/7F = -0.71I/1F
\]
\[
OC(\text{Barry, ironing}) = -2F/4I = -0.5F/1I \quad OC(\text{Mary, ironing}) = -7F/5I = -1.4F/1I
\]

Mary has the lower opportunity cost (and comparative advantage) in folding, Barry in ironing.

4. Suppose there are three countries in the world with three different national currencies, the U.S.
dollar ($), the French franc (FF), and the German Deutschmark (DM). These three countries post
the following dis-equilibrium exchange rates:

\[
1 \text{ DM} = 3 \text{ FF} \quad $1 = 2 \text{ DM} \quad 5 \text{ FF} = $1
\]

1. Show how a trader could profit from these dis-equilibrium exchange rates.

Convert $100 to 200 DM, then to 600 FF, and back to $120: $20 profit.
Going backwards around the circle results in a loss of $16.67.

2. Calculate the correct DM to FF (or FF to DM) exchange rate, assuming the other two exchange
rates remain unchanged.

DM to FF should be \( 1 \text{ DM} = 2.5 \text{ FF} \)