Answer all of the following questions, using graphs where necessary. Please be concise and thorough.

1. Preparation time for the typical family meal has dwindled from two and a half hours in the early 1960s to 15 minutes today. Over the same time period, brown-bag lunches for school kids have yielded to prefabricated “meal kits.” For example, Oscar Meyer launched its packaged *Lunchables* in 1988 and by 2000 was making nearly $600 million in meal-kit profits. Using the concept of opportunity cost, explain these phenomena.

The substitution of meal kits for brown-bag lunches suggests that time has become a relatively more scarce commodity over the past 49 years. While brown-bag lunches are relatively cheaper than buying a prefabricated meal kit, they are also more time-intensive to prepare. The total cost of a brown-bag lunch then is not just the monetary cost of its ingredients but also the opportunity cost of the time required to prepare them. The fact that Americans are instead choosing to spend more money on meal kits that require little or no time to prepare them suggests that the opportunity cost of their time has become more expensive over the past 49 years.

12.5 Points

2. Consider the market for taxi service in a city. Explain, by using supply and demand curves, how each of the following actions will affect the market. (Consider each case separately, using a different graph/explanation)

A). Bus drivers go on strike.

If bus drivers go on strike, then those people who would have taken the bus must now turn to alternate forms of transportation. It is unlikely that a bus-rider would have his or her own car; therefore, it makes sense that these consumers would turn to taxis. This increase in the number of consumers would shift the Demand curve to the right (D2), resulting in an increase in equilibrium Price and Quantity (P2, Q2).

6.25 Points
B). Taxi drivers must pass a competency test, and one-third fail. 
If one-third of taxi drivers fail a required competency test, then this would dramatically decrease the number of available taxi-cab drivers on the road. This situation would shift the Supply curve to the left (S2), resulting in an increase in equilibrium Price and a decrease in Quantity (P2, Q2).

C). Gasoline prices increase. 
Gasoline is a necessary input into the production of taxicab rides; therefore, an increase in this input would increase the cost of producing taxicab rides. This increase in the cost of production can be seen by a leftward shift of the Supply curve (S2), resulting in an increase in equilibrium Price and a decrease in Quantity (P2, Q2). 
**PLEASE SEE GRAPH IN PART B FOR ANSWER**

* I will also accept an increase in D with the explanation that people will prefer to take a taxi rather than drive their own cars and have to pay for gasoline. 

D). The population of the city increases. 
If the city’s population increases, this should also result in an increase in the potential customer base for taxicab rides. This increase in the number of consumers would shift the Demand curve to the right (D2), resulting in an increase in equilibrium Price and Quantity (P2, Q2). 
**PLEASE SEE GRAPH IN PART A FOR ANSWER**

* I will also accept an increase in S with the explanation that an increase in the population will result in an increase in the number of taxicab drivers.

3. “If you are indifferent between two market baskets, then you would allow someone else to decide which basket you receive, even if that other person is your worst enemy.” Do you agree or disagree? Why? 
If you are indifferent between two market baskets, then you will receive an equal amount of utility from either basket. This indifference means that you do not care...
which basket you receive; therefore, it should not matter to you who chooses the basket you will receive.

12.5 Points

4. Explain why a consumer’s well-being is not constant along a demand curve. Each point along the demand curve represents a point along the price-consumption curve. The P-C curve shows how the amount of a good that a consumer chooses consume changes as the price of that good changes. For a good with the usual downward-sloping Demand curve, any decrease in price will rotate the budget line out, corresponding to a higher indifference curve and a higher amount of the good consumed. Because the Demand curve is comprised of these various equilibrium points along the P-C curve, a consumer’s utility will necessarily change as s/he moves to different equilibrium points based upon the new price of the good.

*Please see pp. 86-87 of your textbook for additional explanation and a graph.*

25 Points

5. Show the welfare cost of an excise subsidy. What would it cost the government to give an equivalent lump-sum subsidy?

The initial equilibrium is point $E_1$. Effectively, an excise subsidy cuts the price of good X because it offers a subsidy per unit of the good. This swivels out the budget line so that more of good X can be bought than before for any given level of spending on other goods. The new equilibrium is at point $E_2$. A lump sum transfer must allow the consumer to also consume the same amount of good X as under the excise subsidy program ($E_2$). However, the lump sum...
transfer would not change the price of good X, so it is represented as a parallel shift of the budget line.
The excise subsidy costs distance AC which is the same as the lump sum transfer, but it would cause the consumer to overconsume good X by the difference between $E_2$ and $E_3$. This difference in the welfare cost (deadweight loss) of the subsidy (which can also be shown using a Demand Curve).

**However, the lump sum transfer cannot be shown with a Demand curve** (see pp. 125 first paragraph of your textbook).

If the government's aim is simply to raise the household's welfare (utility level) then it should choose the lump sum transfer.

25 Points

6. After the Arab oil embargo in the early 1970s, the government set up a contingency plan that included rationing gasoline. Ration coupons were printed in case the plan was ever implemented. Some proposed that if the plan was implemented, consumers should be permitted to buy and sell coupons legally. Others disagreed and said that it should be illegal to buy and sell coupons. Which plan would be the most likely to be efficient? Why?
The efficient plan would be one which allowed consumers to buy and sell gas coupons legally. A gas ration coupon brings each individual a differing amount of utility. For example, someone who walks or rides a bicycle or does not own a car would have little need for gas coupons while someone with an SUV would have a great need for gas coupons. If the bicyclist was allowed to sell his coupons to the SUV driver, then both individuals would be better off than if the trade was prohibited (a Pareto Improvement). Once all trades between such individuals had taken place, then no one individual could be made better off without making another worse off (Pareto Efficiency).

12.5 Points
7. How is an equal distribution of goods shown in the Edgeworth Box diagram? Is an equal distribution efficient?

An equal distribution of goods is shown in an Edgeworth Box diagram by a point such as A, where both Edge and Worth receive equal amounts of both goods. This distribution may be equitable, but it is not necessarily efficient. Only points along the Contract Curve are efficient in that they show each individual’s maximum level of well-being (being on the highest indifference curve possible) without diminishing the well-being of the other person. This means that points along the Contract Curve show all points of tangency between both trading partner’s indifference curves. An equal distribution of goods does not guarantee that point of tangency as can be seen below:

Football tickets \( F_E \) \( F_W \) 0 Worth

Ballet tickets

0 Edge \( F_E \) \( F_W \)

12.5 Points