Week #5 Worksheet Solutions – Price Control ~ Deadweight Loss
*Mostly, Demand and Supply Analysis Related.

What happens to the equilibrium price and quantity in the market:

a. Equilibrium price increases, equilibrium quantity increases
b. Equilibrium price increases, equilibrium quantity decreases
c. Equilibrium price decreases, equilibrium quantity decreases
d. Equilibrium price decreases, equilibrium quantity increases
e. Equilibrium price increases, the change in equilibrium quantity is ambiguous
f. Equilibrium price decreases, the change in equilibrium quantity is ambiguous
g. The change in equilibrium price is ambiguous, equilibrium quantity increases
h. The change in equilibrium price is ambiguous, equilibrium quantity decreases
i. None of the above. Why?

1. Market for cotton: Recent flooding in China and Pakistan has wiped out many cotton crops.
Flooding → Supply curve shifts left (decreases) → Market forces work to increase prices and decrease the quantity ∴ B

2. Market for 3D TVs: A technological advancement is made in the production of 3D TVs.
Increase in technology → Supply curve shifts right (increases) → Market forces work to decrease prices and increase the quantity ∴ D

3. Market for loanable funds: Interest rates increase.

Interest rates increase → Increase in quantity supplied, decrease in the quantity demanded → surplus → interest rates will eventually fall back to equilibrium ∴ I

4. Market for summer labor: The equilibrium wage is $10.00 and the government imposes a minimum wage of $8.00.
The government imposes a minimum wage below the equilibrium wage (Nothing happens to the equilibrium. At $8.00 there is a shortage of labor, and people are still making $10. Many will not take $8. The company still needs the same number of people to continue operating. Absolutely nothing happens. The minimum wage of $8 is ineffective in a market whose equilibrium wage is higher than $8. ∴ I

5. Market for beer: A serious drought destroys 30% of all hops and barley.
Drought → Supply curve for hops and barley shifts left (decreases) → Equilibrium hops and barley prices increase → Hops and barley are an input for beer → Input prices rise → Supply of beer shifts to the left (decreases) →The new equilibrium prices are higher and quantities are less than the previous equilibrium ∴ B

6. Market for disco music in Raleigh: Disco Stu skates through town and a disco craze takes over the NC State.
Disco Stu is awesome, people want to be him → more people now want more disco music, memorabilia, clothing, and accessories at current prices → Demand for disco music shifts to the right (increases) → New equilibrium prices and quantities are both higher than the previous equilibrium ∴ A

7. Market for peanut butter: A study finds that peanut butter eaters tend to live longer than non-peanut butter eaters. At the same time, there is an exceptionally large yield of peanuts during the harvest.

The study causes demand to shift to the right. The exceptionally larger yield causes supply to shift to the right. Without any additional information all you know is that equilibrium quantity increases. The change in price is ambiguous. Try to draw it several times if you don't understand why. ∴ G

8. Market for housing: Interest rates increase.

Interest rates increase and the quantity demanded of loans decreases. At current prices there are less people willing and able to make offers on houses. Demand for houses shifts left. New equilibrium prices and quantities are lower than the previous equilibrium. ∴ C

9. Market for construction labor on the Texas Gulf Coast: Oil prices increase and owner organizations wish to execute a larger number of capital maintenance projects. At the same time bonuses and per diems increase drastically in Louisiana for similar types of work.

The Texas Gulf Coast is a major industrial region. There are many oil refineries and chemical plants. When crude oil prices rise companies who explore/drill/ produce oil have an incentive to increase the quantity of crude oil supplied. The crude oil is an input into the production of fuel, chemicals, plastics, etc. When the price of an input increases, the supply of the derivative product shifts left. A decrease in the supply of gasoline would generally be associated with the scale back of operations at a refinery. That includes a scale back in the execution of capital maintenance projects. Thus, there is a decrease in demand for construction labor. At the same time, the supply of labor shifts left as construction workers on the Texas Gulf Coast are lured to Louisiana. Without any other information all you can tell me is that equilibrium quantities decrease. ∴ H