1. What happens to equilibrium supply and demand if a price floor is set below the equilibrium price?

Nothing happens. Since the floor is below equilibrium, the market is still able to determine the quantity and price the same way it always does.

2. What happens to producer surplus when a price ceiling (below the equilibrium price) is enacted? What happens to consumer surplus? Will there be a shortage or a surplus in the new equilibrium?

Producer surplus unambiguously falls. The change in consumer surplus is ambiguous—on the one hand, some consumers don’t get to purchase the good anymore and this makes CS fall. But on the other hand those who still get the good pay even less for it, and this makes consumer surplus rise. There will be a shortage at the new equilibrium.

3. Suppose the minimum wage was lowered, and consider a labor market (so the “price” is the wage workers get paid) where the both the new and the old minimum wage act as a price floors above equilibrium price. Draw a graph of the labor market before and after the policy change. Illustrate how unemployment will change as a result of policy. What happens to consumer surplus? What happens to deadweight loss?
In the new equilibrium, the new quantity of labor supplied has fallen—few people are looking for work. The number of people actually employed (represented by the equilibrium quantity of labor) has gone up. Both of these things lead to lower unemployment. Dead Weight Loss has fallen, as is illustrated by the shaded area.

4. Suppose that supply is perfectly elastic, and demand is perfectly inelastic. Suppose that a price floor is set above equilibrium price. What will happen to producer surplus, consumer surplus, and the equilibrium price and quantity?

As the price rises above the equilibrium price because of the price floor, firms are willing to supply an infinite amount of the good. But consumers are only willing to buy the exact
same amount as before—so the price rises, but the quantity exchanged in the market is unchanged. Now, suppliers in the market receive a price larger than the minimum they would need to charge to produce each unit. So there is a shift in surplus from consumers to producers.

5. Consider the market for tickets for Notre Dame football games. Suppose there is a price ceiling in this market that is set below the equilibrium price. Is it possible for the resulting ticket prices charged by scalpers to exceed the original equilibrium ticket price?

Yes, in fact it is likely that the scalpers will charge a price greater than the original equilibrium price. How much scalpers will raise the price depends on the maximum price scalpers can charge for the quantity of tickets available in the face of a price ceiling. This in turn depends on the elasticity of demand. An inelastic demand curve will lead to scalpers being able to charge a higher price, an elastic demand curve will lead to scalpers being able to charge a lower price. The more elastic demand, the closer the scalpers’ price will be to the equilibrium price (you should draw a picture of this to confirm).