# ANSWER KEY TO QUIZ 5: ECON 102, SECTION 1

Prepared by SERGIY STETSENKO (sestet@sas.upenn.edu)

Q1. (1 point for correct answer, 2 points for explanation).

False. The prediction of a model is equilibrium. It may be Pareto Optimal Allocation but may be not.

Q2. (1 point for correct answer, 2 points for explanation).

True. An increase in the second period income implies an increase in the lifetime income, hence, current and future consumption go up. Since current income is constant, savings go down.

Q3.

The First Welfare Theorem states that under certain conditions, a CE is PO. Therefore, policy should do nothing.

Q4.

See Figure 8.3 and Figure 8.4 in the Williamson's book.

Q5.

The volatility of Consumer Durables is the highest, followed by that of GDP and the volatility of Non-Durable Consumption and Services is the lowest.

Q6.

Under certain conditions, a PO can be implemented as a CE by transferring only resources (one good alone) not all of them.

Q7.

Non lump sum tax will distort price. Now MRS = (1-t)w, but MRT = w. Since MRS ≠ MRT, The First Welfare Theorem does not hold.

Q8.

Adverse selection: If insurance company sells the health policy at a fixed price, only individuals who know they are more likely to get sick will buy the policy.

Moral hazard: individuals who buy the full insurance for their cars will not take great care of their cars.

Q9.

An externality implies that the individual MRS or MRT will not equal the social MRS or MRT. Since agents equate the individual rates to prices and hence to each other and optimality requires that the social MRS is equal to the social MRT then the equilibrium may not be optimal.

Q10. (1 point for correct answer, 2 points for explanation).

True. If the household is a lender, a decrease in the interest rate will lead to a lower lifetime income.

Q11.

A pure tax cut is not possible. The government has to pay for what it spends. There is a theoretical possibility that a tax rate cut results in an increase or non decrease of tax revenue. This happens if we were in the decreasing part of the Laffer curve. This is just a theoretical possibility since empirically it seems that we are in the increasing part of that curve.

Q12.

If they both have the same opportunities and the assumptions needed for the first welfare theorem hold then both are happy and they do not want to be the other.

If they have different opportunities, and the same preferences one could be better if having the option of choosing the allocation of the other did not. In other words, if the choice of a society A is feasible for a society B then one could argue that society B is better off.

Q13.

Equilibrium is a situation where consumers do what they want (maximize utility), producers do what they want (maximize profit) and their actions are compatible (market clearing). This is achieved via prices w and r.