Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Econ 304—Bethany College

**Exam 01**

* There are 110 possible points on this exam. The test is out of 100.
* You have one hour to complete this exam, but you should be able to complete it in less than that
* Please turn off all cell phones and other electronic equipment.
* You are allowed a calculator for the exam. This calculator cannot be capable of storing equations. This calculator cannot double as a cell phone.
* Be sure to read all instructions and questions carefully.
* Remember to show all your work.
* Recall basic logic. “Water is wet” is a true statement. “Water is wet and leopards have stripes” is a false statement.
* *Please print clearly and neatly.*

**Part I: Multiple Choice.** *Choose the best answer to the following.*

5 points each.

1. In the long run, how much profit does a firm in a perfectly competitive industry make?
	1. Zero accounting profit
	2. Zero economic profit
	3. A positive accounting profit which is also equal to their opportunity cost
	4. **B & C**
	5. None of the above

*Since C is the definition of B, the answer is D.*

1. Which of the following is ***not*** an assumption of Walrasian equilibrium?
	1. **Everyone produces based on their opportunity cost**
	2. No one has price setting power
	3. Prices are stable
	4. A & C
	5. None of the above

*Recall in this model there is no production. The others are assumptions.*

1. Leon Walras is famous for his work in developing which economic concept?
	1. Pareto efficiency
	2. **General equilibrium theory**
	3. Edgeworth boxes
	4. A & C
	5. None of the above

*Pareto efficiency and Edgeworth boxes are the namesake of other scholars: Vilfredo Pareto and Francis Edgeworth.*

1. Which of the following is an example of a Pareto improvement?
2. **Burning down a house no one knew even existed.**
3. Taxing the wealthy and giving to the poor (since the wealthy value an additional dollar less).
4. Playing your favorite music excessively loudly.
5. A & C
6. None of the above

*Option B clearly doesn’t work—the wealthy are worse off—and Option C doesn’t work since “excessively loudly” implies you are annoying others. In Option A, one must assume you burned down the house for a reason, and because no one even knew it existed, no one can be claimed to be worse off. While there is some ambiguity here, that ambiguity is meant to help you think about the distinctions. The exam will be less ambiguous.*

1. What do all points on a contract curve have in common?
2. **All points are Pareto efficient**
3. All points are Pareto improvements
4. All points have the same MRS
5. B & C
6. None of the above

*While all points are where two indifference curves have the same MRS, that does not mean all MRSs are the same. But all are Pareto efficient.*

1. If total cost is 4+Q2 and total revenue is 3Q, what is the optimal amount of Q?
2. 0.25
3. 0.67
4. **1.50**
5. 4.00
6. None of the above

*MC = 2Q; MR = 3; Q\* = 1.5.*

1. If a new hire discovers he can lessen his workload without penalty by exaggerating how long it takes to complete a project and starts doing so, this is an example of:
	1. **Moral hazard**
	2. Adverse selection
	3. Why firms monitor workers
	4. A & C
	5. None of the above

*Because the problem occurred after he was hired, it’s filed as moral hazard. Monitoring is a way to combat moral hazard.*

1. Which of the following is a problem with Nozick’s Entitlement Theory of Justice?
	1. People like different things.
	2. There is a danger that you discourage hard work.
	3. **A government can’t maintain a court system.**
	4. A & B
	5. None of the above

*As a public good, a society built around not taking property would have difficulty providing a court system since Nozick is against any taxation.*

**Part II: True/False.** *Answer true or false, and justify your answer.*

10 points each.

1. Edgeworth boxes make different assumptions of indifference curves which is why some indifference curves are concave.

*False. Indifference curves are always convex but because the orientation of the extra axes of an Edgeworth box, they appear concave.*

1. If the only way to signal wealth is by purchasing a nice house and the price of houses decreased, in the long run more people would be able to signal wealth.

*False. If it becomes cheaper to signal, the signal loses meaning so people signal more intensely. Houses will become cheaper, so everyone will get a bigger house to signal wealth. And since it’s the only way to signal wealth, we know they just won’t rely on other signals.*

1. Without skeptics, ordeals ensured a completely just and efficient justice system in the Middle Ages.

*True. If no one doubts the Godly power of ordeals, then only the people who volunteer to undergo them are innocent. The guilty will confess. This is a very efficient system—it costs little to employ these ordeals—and completely just. The innocent are exonerated and the guilty suffer.*

**Part III: Short Answer.** *Answer the following.*

15 points each.

1. Sketch the contract curve of the Edgeworth Box below. If Alpha is an owner of a successful company that gets many subsidies from the government, where should we prioritize the allocation under Nozick, Rawls, and Utilitarianism (assume Beta is a middle class plumber)?

Waterα

Powerα

0

100

0

100

Powerβ

Waterβ

100

100

0

0

**0**

**4**

**6**

**10**

**0**

**5**

**8**

**11**

**6**

**3**

**1**

**9**

**A**

**B**

*Because Alpha’s gains aren’t justly acquired (he gets them via taxes), we prioritize Beta’s gains so A is the best option under Nozick.*

*Because Alpha is much wealthier than Beta, we should get should more to Beta so A is also the best option under Rawls. Rare do Rawls and Nozick agree.*

*The highest utility (at least for certain) is at B, where 8+4=12.*

1. We discussed many reasons why the American healthcare system is screwy. Suppose the U.S. switched to a government health system (the government pays for healthcare for everyone in the manner of Medicare). Discuss a way this would be better than the current system (excluding the Affordable Healthcare Act) and a way this would be worse.

*It’s better in that your insurance will no longer be tied to your job, thus folks will no longer be denied insurance based on pre-existing conditions and they won’t have to spend time searching out new insurance in the meantime. The same entity will benefit from when they are healthy and when they are sick. Meanwhile, because everyone pays taxes, funding this system (on the surface) is more viable than just passing a law preventing firms from discriminating against victims of pre-existing conditions*

*On the downside, because an agency does not collect profit from cost savings it has little incentive to combat fraud (i.e. moral hazard). This puts upward pressure on the cost of healthcare, intensifying an already difficult problem. Moreover, it generates a monopoly on health insurance and, like public schools or the DMV, creates an opportunity for reductions in quality without consumers able to respond by opting for a competitor.*

1. In the market for lemons, Akerlof used these utility functions…

$$U\_{1}=M+\sum\_{i=1}^{N}x\_{i}; U\_{2}=M+\frac{3}{2}\sum\_{i=1}^{N}x\_{i}, $$

…to construct these equations…

$$μ=^{p}/\_{2}$$

$$S\_{1}=^{pN}/\_{2} , p\leq 2$$

$$D\_{1}=^{Y\_{1}}/\_{p} , ^{μ}/\_{p}>1$$

$$D\_{1}=0 , ^{μ}/\_{p}<1$$

$$S\_{2}=0$$

$$D\_{2}=^{Y\_{2}}/\_{p} , ^{3μ}/\_{2}>p$$

$$D\_{2}=0 , ^{3μ}/\_{2}<p$$

Where S and D are the demand and supply curves, p is price, μ is average quality, and Y is income. Write Akerlof’s conclusion (as in, write the combined demand curves for the different relations between p and μ). Suppose we assume that people aren’t good at remembering the good cars they’ve encountered but the bad ones stick out in their minds. In other words, “average quality” for our purposes is lower than a uniform distribution would normally suggest. Suppose μ=¼p rather than μ=½p. Find the combined demand curves under these circumstances. Has Akerlof’s conclusion changed? Why or why not?

*To start, we combine demand curves:*

*If μ > p, D = (Y1 + Y2)/p*

*If μ < p < 1.5μ, D = Y2/p*

*If 1.5μ < p, D = 0*

*Since μ= 0.5p, then p < 0.75p to have a market, which can’t happen.*

*If we set μ=0.25p, then the demand curves are the same but now p < 3/8p to have a market, which also cannot happen. Akerlof’s conclusions do not change.*