Name: **Key**

ECON 201—Montgomery College

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**Exam 3**

* There are 110 possible points on this exam. The test is out of 100.
* You have two hours 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.
* Try all questions! You get zero points for questions that are not attempted.
* *Please print clearly and neatly.*

**Part I: Matching.** *Write the letter from the column on the right which best matches each word or phrase in the column on the left. You will not use all the options on the right and you cannot use the same option more than once.*

2 points each.

|  |  |
| --- | --- |
| 1. **I** Balance of payments 2. **K** Capitalism 3. **L** Command system (socialism) 4. **E** Compensating differentials 5. **D** Diminishing marginal returns 6. **A** Effectiveness lag 7. **G** Efficient market hypothesis 8. **J** Fundamental Theorem of Exchange 9. **C** Liquidity trap 10. **H** *That Which Is Seen and That Which Is Not Seen*  (Bastiat) | 1. A problem for both monetary and fiscal policy 2. A problem for fiscal policy only 3. A problem for monetary policy only 4. Explains why countries should converge 5. Explains why fun jobs should have a lower salary 6. Explains why inequality is desirable 7. Explains why the best guess of the price of gold tomorrow is the price of gold now 8. Explains why opportunity cost is important 9. Explains why the trade deficit is only half of what’s going on 10. Explains why trade is so desirable 11. When individuals own the means of production 12. When the government owns the means of production 13. When no one owns the means of production |

1. *The balance of payments states that NX+CA=0, or that the net flow of goods and services plus the net flow of investment equals zero. When evaluating how much the trade deficit matters, remember it’s only half of what’s going on; it is an arbitrary distinction between the current account (net exports) and the capital account (net investment).*
2. *Capitalism is when private citizen own the means of production; they largely determine what to produce and how it’s produced. They keep the profits and suffer the losses. (For those who listened to Bernie Sanders’ November 2015 speech on what democratic socialism is, you’d learned Sanders is a capitalist. “I don’t believe government should own the means of production,” he said.)[[1]](#footnote-1)*
3. *Command systems involve a central authority—the state—to decide what is produced and how. Option M best represents communism—when there is no property—but such a system becomes socialism in practice.*
4. *“Differences in working conditions are offset by differences in wages” describes this concept. With so many people who want to do a fun job, the additional supply causes the price—the wage—to fall.*
5. *Each additional unit becomes less productive and this applied to each additional unit of capital, too. Wealthy countries have a lot of capital so there’s little growth when they get an additional unit. Poor countries have little so they grow a lot when they get an additional unit. Poor countries grow faster.*
6. *Both monetary and fiscal policy suffer from effectiveness lag; once the plan is put into action it takes time for the economy to grow, for AD to shift.*
7. *The EMH is defined as “the price of tradable assets reflects all publically available information.” If the price of such an asset is $100, it’s most likely price tomorrow is still $100. This is true even if the price has been going up for a while. It might go up tomorrow, but it might go down as well. On average, the expected change is zero. (If it wasn’t zero, the price would change now.)*
8. *All trade with complete information benefits both parties involved; like any sort of voluntary relationship, it’s hard to argue that it’s a bad thing.*
9. *The liquidity trap occurs when interest rates cannot fall any more. Since expansionary monetary policy, and only monetary policy, is built around lowering interest rates to shift AD right, it won’t work if there’s a liquidity trap.*
10. *Bastiat’s reading implored people to consider the not seen part of any decision. By doing one thing, you cannot do some other thing; this is opportunity cost.*

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

3 points each.

1. We’ve discussed that income equality had a greater justification than simply good feelings. What is the economic argument in favor for reallocation, ceteris paribus?
   1. It increases productivity
   2. **It increases total utility**
   3. It decreases waste
   4. A & C
   5. None of the above

*Much like the Fundamental Theorem of Exchange, reallocation, ceteris paribus, increases total utility. By taking money from those with a low marginal value of money and giving it to those with a high marginal value of money, aggregate satisfaction increases. “All other things being equal” is an important qualifier here: if you reallocate, you can make total utility on net fall because of a drop in efficiency.*

1. Which of the following people are unemployed (according economists’ definition of unemployment)?
   1. Jadzia, who was just arrested for stealing maple syrup but really wants a job.
   2. Kaida, who is afraid of going outside; while she wants a job, she hasn’t bothered looking due to her phobia.
   3. Piri, who works part time at McDonald’s and is actively looking for a full time position?
   4. B & C
   5. **None of the above**

*Jadzia can’t be employed; she’s out of the labor force no matter how much she wants a job. Kaida isn’t actively looking for work so she’s not in the labor force, either. Piri is in the labor force but because she’s working—even if it’s part time and she wants a full time job—that still counts as being employed.*

1. Suppose there is a sudden drop in the price level, resulting in deflation. Who is hurt by this change?
   1. **Abigail, who just took out a student loan at a fixed rate.**
   2. Bansi, who has $25,000 in his savings account.
   3. Cala, who just signed a five-year contract which locks her salary in at $40,000 a year.
   4. B & C
   5. None of the above

*Bansi’s savings increase in value in real terms as a result of deflation. His $25,000 can buy more things and because it was a surprise change, his interest rate isn’t adjusted for this deflation. In other words, his real interest rate just increased.*

*Cala’s contract locks in her wage for five years. That means her wage in real terms just increased because she can buy more things for the same amount of money. She also benefits from this surprise deflation.*

*But Abigail’s student loans will have the same interest rate and since the deflation was a surprise, her real interest rate is really high. As deflation helps savers, it hurts borrowers.*

1. For capitalism to function, several requirements have to be met. While developing countries often lack all of these requirements, Hernando de Soto highlights that the absence of one of them is particularly important. Which one is it?
2. Owners of capital do not suffer the losses.
3. Owners of capital do not keep most of the profit.
4. Capital is largely owned by the government.
5. There are no opportunity costs.
6. **None of the above**

*De Soto argues that people in developing countries do not legally own their capital. Property rights are not clearly defined.*

1. In May 2014, the Commerce Department reported that the United States trade deficit shrank 3.6% earlier that year in March.[[2]](#footnote-2) All other things being equal, which of the following would then be true?
2. GDP decreased
3. **The capital account decreased**
4. The capital account increased
5. A & C
6. None of the above

*If the capital account decreased, then GDP should increase, all other things being equal. Similarly, a falling trade deficit means there are fewer net dollars being sent abroad, which means there are fewer people using that money to invest in the United States; the capital account should fall.*

1. In theory, poor countries should catch up with wealthy countries. Why?
   1. **Because poor countries have relatively little capital**
   2. Because poor countries will trade more with wealthy countries
   3. Because wealthy countries tend to have stable governments
   4. A & C
   5. None of the above

*There is diminishing productivity of capital; because wealthy countries have a lot of capital and poor countries have little capital, additional capital in poor countries add a lot of productivity. Therefore, it’s relatively easy to increase income/productivity in poor countries compared to wealthy countries. Thus, poor countries should grow faster and catch up to poor ones.*

1. If the Gini Ratio for a country is high, that means:
   1. That country’s average income is low compared to other countries.
   2. **That country has a lot of income inequality compared to other countries.**
   3. That country has a lot of income equality compared to other countries.
   4. A & B
   5. None of the above

*The Gini Ratio is defined as the area between the 45-degree line and the Lorenz Curve (actual distribution of income) divided by the 45-degree line and the x-axis. If the numerator is large, Gini is large, and the distribution of income is very unequal. Gini, however, has nothing to say about average income. There are countries that are equal and poor and those that are equal and rich.*

1. Suppose you’re a bank in England, where the pound is the local currency. If you do ***not*** intend on purchasing any U.S. goods or services, why would you allow people to give you U.S. dollars in exchange for British pounds?
2. You might be interested in investing in European companies.
3. You might be interested in purchasing stock in a U.S. company.
4. You might be interested in buying U.S. government bonds.
5. **B & C**
6. None of the above

*Both B and C are types of investment; the other major reason foreigners want U.S. dollars is to invest in the United States. We see this money come back in the form of the capital account. Investing in European companies would require the Euro, not the dollar.*

1. Which of the following is an example of the Fundamental Theorem of Exchange in action?
2. Jill buys her favorite snack—roasted snake with sardines—which allows the store owner to stay open.
3. Greg and Mary, a married couple, go out to eat together.
4. Homer getting a mystery box (contents unknown) as payment for work.
5. **A & B**
6. None of the above

*I personally wouldn’t consider roasted snake with sardines appetizing but Jill apparently does; she bought something from someone and the store owner sold it for a price higher than it took to produce (otherwise, s/he wouldn’t have made the money to stay out). Both parties are better off, even if the store owner is much better off than she. (Mutual benefit isn’t the same as equal benefit.)*

*Greg and Mary also engaged in mutually beneficial exchange. Just as you can trade in money and goods, you can also trade in time. Each gave up time doing something to spend time with the other. This exchange enables both parties to be better off. And since they know each other so well, they are unlikely to regret the exchange.*

*But Homer got a mystery box; he doesn’t know what’s inside. Therefore, it’s possible it’s not mutually beneficial because there could be something undesirable in there. He could regret his exchange of labor for box.*

1. Which of the following is an example of an automatic/built-in stabilizer?
   1. Open market operations
   2. Increase spending on NASA projects
   3. Cutting taxes
   4. B & C
   5. **None of the above**

*Option A is monetary policy; automatic/built-in stabilizers are fiscal policy. But they are not any fiscal policy: deficit spending (more spending or lower taxes) must increase automatically with a recession. Any sort of tax cut or NASA spending doesn’t do that; that requires congressional approval.*

1. Which of the following makes prices less sticky?
2. **Digital price tags**
3. A law establishing a minimum contract time of one year
4. An increase in government spending
5. A & B
6. None of the above

*Digital price tags combat menu costs. With digital price tags, it’s much cheaper to change prices, thus prices are more flexible.*

*B is not a good answer; if the option said this was a maximum contract time, then contracts would be altered more frequently and thus prices would be less sticky. But a minimum time means contracts, if anything, will last longer. Prices will be stickier.*

1. Which of the following is ***not*** *explicitly* included in GDP?
2. Cat food
3. Haircuts
4. **Live chickens**
5. A & C
6. None of the above

*When chickens are sold alive, they are typically sold to slaughter houses or similar firms. These firms clean and kill the chicken and then sell the result either to other firms or to the consumer. While chicken is part of GDP, live chickens are not explicitly counted. Their inclusion only occurs when the final product (say, chicken noodle soup or a roasted chicken) is sold.*

1. Which of the following is an example of human capital?
   1. An engineer’s knowledge of all of the plots and characters of the *Harry Potter* novels.
   2. A carpenter’s tools.
   3. **A musician’s understanding of how to play her violin.**
   4. A & C
   5. None of the above

*Option B is conventional capital. While option A is a skill, much like C, it doesn’t help the engineer be productive. Therefore, it’s not capital.*

1. From the Atlantic:[[3]](#footnote-3)

The debate about breast-feeding takes place without any reference to its actual context in women’s lives. Breast-feeding exclusively is not like taking a prenatal vitamin. It is a serious time commitment that pretty much guarantees that you will not work in any meaningful way. Let’s say a baby feeds seven times a day and then a couple more times at night. That’s nine times for about a half hour each, which adds up to more than half of a working day, every day, for at least six months. This is why, when people say that breast-feeding is “free,” I want to hit them with a two-by-four. It’s only free if a woman’s time is worth nothing.

The author is using what economic idea to illustrate the expense of breast-feeding?

1. **Opportunity cost**
2. Human capital
3. Increasing marginal cost
4. B & C
5. None of the above

*By spending time breast-feeding a woman cannot do other things, including working a full-time (or even part-time) job. The worth of a woman’s time (or anyone’s time) is measured by the opportunity cost.*

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

12 points each.

1. Consider the companies below which make up FicDex, a fictional index. The table indicates their stock price without any stock splits.

|  |  |
| --- | --- |
| **Company** | **Stock Price** |
| Jedi Tricks Unlimited | $110 |
| Big Box Retailers | $100 |
| Something Industries | $70 |
| Vague Corp | $120 |

Suppose Vague Corp issued a stock split, doubling the number of shares. Calculate the new divisor for FicDex. Remember to show all your work.

*The first step is to calculate the value of the index before the stock split.*

*Now we recognize that if Vague Corp doubles its stocks, it will halve its stock price (that way the firm will have the same value). We also recognize that FicDex won’t change its value (since Vague Corp’s value hasn’t actually changed even though its stock price did). Therefore, we must change the divisor. Let the divisor be D.*

1. Consider the AD/AS diagram of an economy below.
   1. Illustrate the short-run effect of expansionary monetary policy at equilibrium (as illustrated in the diagram);
   2. Illustrate the long-run effect of that monetary policy (in other words, what happens in the long-run when the Fed attempts such policies when they are not necessary);
   3. On the lines below, explain the role of the monetary multiplier in this analysis.

You should label each effect to make it clear what part of the graph answers which part of the question.

YR

LRAS

SRAS

AD

PL

AD’

SRAS’

A

B

*This is our demand-pull inflation diagram. If the monetary multiplier was larger, the shift in the AD would be larger, causing a larger increase in short-run real GDP and a larger increase in short-run and long-run inflation.*

1. Using the diagrams below, illustrate the effects of the following (2 points each).
2. The market for rainforest tourism after the price of palm oil increases (note most palm oil is grown on former rainforest land).
3. The market for chocolate chips after the creation of a wonderful new chocolate chip cookie recipe.
4. The market for bicycles after the price of gasoline falls.
5. The market for vacations after the invention of travel website (e.g. Expedia).
6. The market for cars after incomes rise.

*Explanations (not required):*

1. *As the price of palm oil increases, people who own rainforest land will switch to growing palm oil as the opportunity cost of staying in rainforest tourism increases.*
2. *A great chocolate chip cookie recipe will increase the marginal benefit of chocolate chips, causing demand to shift right.*
3. *Bicycles and gasoline (along with the cars it powers) are substitutes; if the price of gas falls, more people will drive instead of bike. Demand for bikes will shift left.*
4. *Travel websites decrease the cost of going on vacation, not just in money but also in time in the form of planning. Supply shifts right.*
5. *Cars are a normal good; as people make more money, more people will buy cars.*

Q

P

D

S

**A**

Q

P

D

S

**B**

Q

P

D

S

**C**

Q

P

D

S

**D**

Q

P

D

S

**E**

D’

D’

S’

D’

S’

1. Illustrate how much capital and output this economy has now. Then illustrate the effect of what would happen if there was an increase in the savings rate. Be sure to label all of the effects of this change.

$

K

δ

I

Y

I’

K\*

K\*’

I\*

I\*’

Y\*

Y\*’

*We begin where investment, I, intersects the depreciation line. If there is an increase in the rate of savings, I shifts up but Y stays the same. The economy can support a larger amount of capital and Y increases.*

*Note this does not mean consumption—the difference between what’s made and what’s saved—increases. In fact, since rate of depreciation is higher than the increase in Y, consumption actually falls.*

1. https://berniesanders.com/democratic-socialism-in-the-united-states/ [↑](#footnote-ref-1)
2. <http://www.reuters.com/article/2014/05/06/us-usa-economy-idUSBREA450GW20140506> [↑](#footnote-ref-2)
3. <http://m.theatlantic.com/magazine/archive/2009/04/the-case-against-breast-feeding/307311/> [↑](#footnote-ref-3)