

Name: **KEY**
ECON 201—Montgomery College
David Youngberg

EXAM 4

- 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 Aggregate demand | A. A problem for both monetary and fiscal policy |
| 2. K Capitalism | B. A problem for fiscal policy only |
| 3. H CPI | C. A problem for monetary policy only |
| 4. D Diminishing marginal returns | D. Explains why countries should converge |
| 5. A Effectiveness lag | E. Explains why inequality is desirable |
| 6. F Efficient market hypothesis | F. Explains why the best guess of the price of gold tomorrow is the price of gold now |
| 7. C Liquidity trap | G. Explains why opportunity cost is important |
| 8. J Short run aggregate supply | H. Measures changes in the price level |
| 9. L Socialism | I. Shifts if car prices increase |
| 10. G <i>That Which Is Seen and That Which Is Not Seen</i> (Bastiat) | J. Shifts if raw material prices increase |
| | K. When individuals own the means of production |
| | L. When the government owns the means of production |
| | M. When no one owns the means of production |

- If car prices increase, people's nominal wealth increases (similar to if housing prices increase), thus they will consume more and AD shifts right.*
- 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.*
- The Consumer Price Index (CPI) measures the prices of a basket of goods and services in order to determine if the price level changes. Changes in the price level is also known as inflation or deflation.*
- 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.*
- 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.*

6. *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.)*
7. *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.*
8. *Raw materials are a kind of input; if input prices increases, SRAS, and not LRAS, shifts left.*
9. *Socialism is when a central authority—the state—decides what is produced and how. Option M best represents communism—when there is no property—but such a system becomes socialism in practice.*
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.

11. In May 2014, the Commerce Department reported that the United States trade deficit shrank 3.6% earlier that year in March.¹ All other things being equal, which of the following would then be true?
 - a. GDP decreased
 - b. The capital account decreased**
 - c. The capital account increased
 - d. A & C
 - e. 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.

12. One can argue the internet made prices less sticky. Which of the following would **clearly** be a logical explanation for this?
 - a. Consumer expectations are less likely to change
 - b. Menu costs are lower**

¹ <http://www.reuters.com/article/2014/05/06/us-usa-economy-idUSBREA450GW20140506>

- c. Contracts last a longer amount of time
- d. A & B
- e. None of the above

Menu costs, or the cost associated with changing a price, are clearly a little lower. The process of literally changing the price on, say, Amazon is functionally zero as it's just a matter of changing a couple of lines of computer code. This does not mean all internet-related menu costs are zero—there are other costs to consider besides changing the menu such as market research and advertising—but it certainly reduces it and thus makes it less sticky.

Neither (A) nor (C) are correct. Option (C) would make prices stickier (it's also not clear why the internet would change how long contracts last). While the internet would alter consumer expectations (people can shop around easier), it would probably make them more fluid, not less. Here, the direction of stickiness matters: consumers are willing to accept a lower price but expectations means they are loathe to accept a higher price (even if it's paired with a higher wage). So, again, Option (A) is likely to make it stickier, not less sticky.

13. If the reserve requirement (aka reserve ratio) is 20% and the MPS is 0.1, what is the monetary multiplier?
- a. 1.25
 - b. 5**
 - c. 10
 - d. 20
 - e. None of the above

The monetary multiplier is found by dividing the reserve requirement/ratio by 1. $1 / 0.2 = 5$; MPS plays no role concerning the monetary multiplier.

14. Economists often debate the size of the fiscal multiplier, particularly when there's a recession. What is the significance of this debate?
- a. A large fiscal multiplier means unemployment will stay high.
 - b. A large fiscal multiplier implies there will be a lot of inflation.
 - c. A large fiscal multiplier ensures fiscal policy will be very effective.
 - d. B & C
 - e. None of the above**

Larger multipliers mean a small increase in government spending shifts AD very far. If the cause of the recession is a drop in AD, then Option C is correct but that relationship is not guaranteed; a recession could be caused

by a real shock. If it is caused by a real shock, Option B is correct: inflation will follow and the price level will rise farther if the multiplier is large.

15. Which of the following people are unemployed (according economists' definition of unemployment)?
- Jadzia, who was just arrested for stealing maple syrup but really wants a job.
 - Kaida, who is afraid of going outside; while she wants a job, she hasn't bothered looking due to her phobia.
 - Piri, who works part time at McDonald's and is actively looking for a full time position?
 - B & C
 - 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.

16. Suppose there is a sudden drop in the price level, resulting in deflation. Who is hurt by this change?
- Abigail, who just took out a student loan at a fixed rate.**
 - Bansi, who has \$25,000 in his savings account.
 - Cala, who just signed a five-year contract which locks her salary in at \$40,000 a year.
 - B & C
 - 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.

17. 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?
- Owners of capital do not suffer the losses.
 - Owners of capital do not keep most of the profit.
 - Capital is largely owned by the government.
 - There are no opportunity costs.
 - None of the above**

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

18. Suppose a new law makes it less likely workers with a high risk of back injuries, such as furniture movers and coal miners, will suffer those injuries. According to compensating differentials, what will happen?
- Workers who have those jobs will be paid less.**
 - Fewer people will want those kind of jobs.
 - The price level will decrease.
 - The unemployment rate for people who work those jobs will increase.
 - None of the above

Under this law, those jobs become more desirable. More people would be willing to do them and that would depress their wages.

19. Which of the following would cause the U.S. AD to shift right?
- The government spends more, funded by increasing taxes.
 - Incomes in China, Europe, and other countries fall due to a recession.
 - Scientists discover a new energy source which can be implemented immediately.
 - A & B
 - None of the above**

Option A has no net effect: government spending shifts AD right but increasing taxes shifts it left. Falling incomes abroad would cause AD to shift left, not right. Option C would cause a rightward shift but of LRAS—because a new energy source would alter the fundamentals of production—not AD. None of these would cause AD to shift right.

20. Which of the following is usually *not* explicitly included in GDP (ignore trade)?
- Cat food
 - Haircuts
 - Live chickens**
 - A & C
 - 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.

The only exception is trade: if chickens are exported or imported, they would be explicitly included even if they were bought by another firm.

21. In October 2015, Deborah Friedell of the *London Review of Books* called into question Donald Trump's claims that he's an excellent businessperson:²

Bloomberg puts Trump's current net worth at \$2.9 billion, Forbes at \$4.1 billion. The *National Journal* has worked out that if Trump had just put his father's money in a mutual fund that tracked the S&P 500 and spent his career finger-painting, he'd have \$8 billion.

The author is using what opportunity cost to illustrate that Trump isn't that great at business. What is Trump's opportunity cost of going into business?

- a. \$2.9 billion
- b. \$5.1 billion
- c. **\$8 billion**
- d. \$10.9 billion
- e. There is not enough information provided to tell

By spending time in the real estate business, Donald Trump gave up on the opportunity to be worth much more. He gave up \$8 billion to be worth \$2.9 billion. His opportunity cost is \$8 billion. And some finger-painting skills, apparently.

22. Which of the following is an example of human capital?
- a. An engineer's knowledge of all of the plots and characters of the *Harry Potter* novels.
 - b. A carpenter's tools.
 - c. **A musician's understanding of how to play her violin.**
 - d. A & C
 - e. 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.

23. We discussed an idea called "concentrated benefits and dispersed costs." Why is it important that costs are dispersed?

² <http://www.lrb.co.uk/v37/n20/deborah-friedell/tycooniest>

- a. It means voters will vote for the best candidate.
- b. It means people are unlikely to complain.**
- c. It means companies will work hard to get certain laws passed.
- d. It means rent will be very high.
- e. None of the above

Because costs are dispersed, the pain to individuals is small. Thus voters are likely to remain ignorant and/or apathetic about any law with concentrated benefits and dispersed costs. Unjust or inefficient laws will persist.

24. What was the most important cause of the Great Depression?
- a. The collapse of the stock market
 - b. An increase in the money supply
 - c. Unregulated capitalism
 - d. The cartelization of industries
 - e. None of the above**

The fundamental cause of the Great Depression was a fall in the money supply. Option (D) was a major reason why the Depression lasted as long as it did.

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

12 points each.

25. We discussed several weaknesses of fiscal policy. Name and **briefly** describe two weaknesses.

Lag. *Fiscal policy suffers from four different types of lag. They are: Recognition lag (it takes time to identify there's a problem); Legislative lag (it takes time to craft and pass legislation to address the problem); Implementation lag (it takes time to transform that legislative plan into action); and Effectiveness lag (it takes time for the plan to have an effect on the economy).*

Crowding Out (Demand). *As the government borrows money to fund deficit spending, that puts upward pressure on interest rates. This, in turn, discourages the demand for investment. Instead of an increase in economic activity, the nature of the activity transforms from private-based to public-based.*

Crowding Out (Supply). *As the government implements fiscal policy, it employs people and firms who are already busy. Workers who are competent enough to work for the government (thus avoiding scandal)*

are typically good workers. Attempts to increase hiring by employing these workers only just transforms private work into public work. I had other names for this type of crowding out (as it's an emerging concern in the literature and thus not well defined at this point), including corruption and unintended consequences.

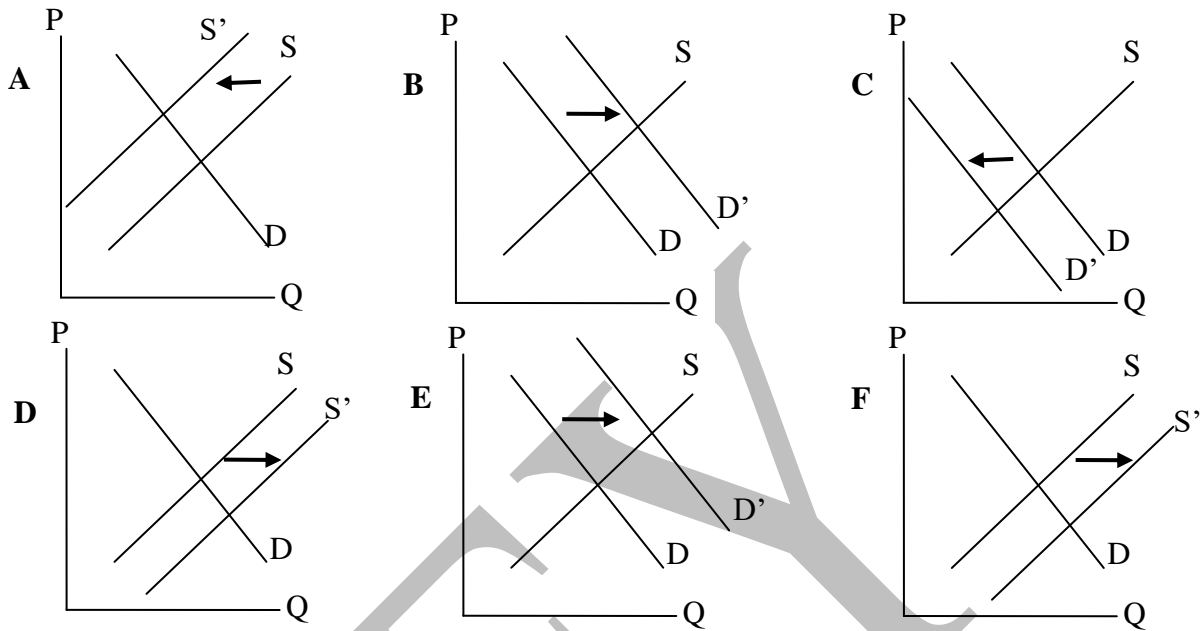
Can't Handle Real Shocks. *Fiscal policy can only work in response if there's a drop in AD. Because a real shock—a shift in LRAS—fundamentally alters the economy, deficit spending will not work. That said, if the deficit spending is used to shift LRAS (such as building infrastructure) it can be effective but for ordinary circumstances, it is not effective.*

26. Using the diagrams below, illustrate the effects of the following (2 points each).
- The market for rainforest tourism after the profitability of palm oil increases (note most palm oil is grown on former rainforest land).
 - The market for chocolate chips after the creation of a wonderful new chocolate chip cookie recipe.
 - The market for bicycles after the price of gasoline falls.
 - The market for vacations after the invention of travel website (e.g. Expedia).
 - The market for cars after incomes rise.
 - The market for clothes after it becomes easier to legally own property.

Explanations (not required):

- 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.*
- A great chocolate chip cookie recipe will increase the marginal benefit of chocolate chips, causing demand to shift right.*
- 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.*
- 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.*
- Cars are a normal good; as people make more money, more people will buy cars.*
- Much as de Soto would predict, if it becomes easier to legally own property, more people could start business and expand*

businesses, including that of textiles. More entrants mean the supply curve shifts right.



27. Consider four countries and their production options, as indicated by the table below. Who has a comparative advantage in beef and who has a comparative advantage in sugar? Remember to show your work.

	<i>Argentina</i>	<i>Brazil</i>	<i>Chile</i>	<i>Peru</i>
<i>Beef (thousands of lbs)</i>	600	1,200	6	75
<i>Sugar (thousands of lbs)</i>	200	1,500	10	50

For beef:

Argentina: $200/600 = 0.33$

Brazil: $1,500/1,200 = 1.25$

Chile: $10/6 = 1.67$

Peru: $50/75 = 0.67$

Argentina has the comparative advantage in beef.

For sugar:

Argentina: $600/200 = 3.00$

Brazil: $1,200/1,500 = 0.75$

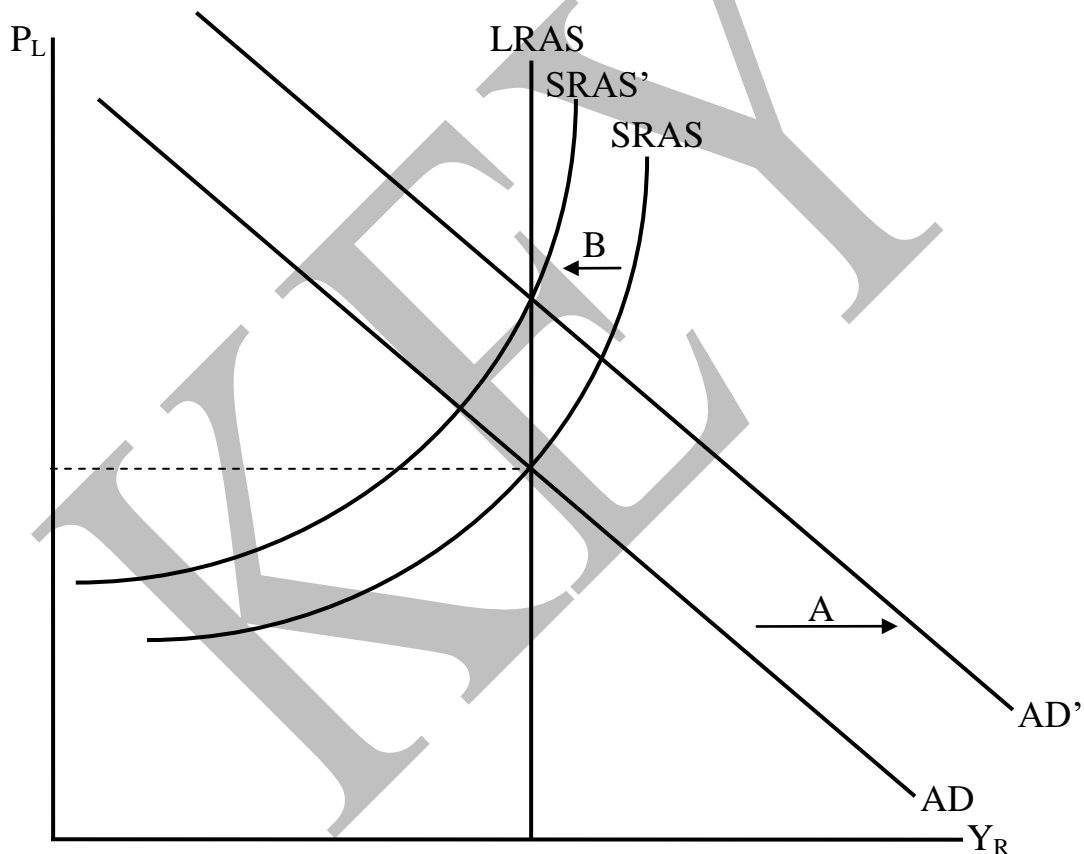
Chile: $6/10 = 0.60$

Peru: $75/50 = 1.50$

Chile has the comparative advantage in sugar.

28. Consider the AD/AS diagram of an economy below.
- Illustrate the short-run effect of expansionary monetary policy at equilibrium (as illustrated in the diagram);
 - Illustrate the long-run effect of the monetary policy in (a) (in other words, what happens in the long-run when the Fed attempts such policies when they are not necessary);
 - 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.



This is a diagram of how inflation happens. 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.