

# Undergraduate (Short-Run) Macro Review Questions\*

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## Abstract

This handout is meant purely for review of the main concepts from (short run) intermediate level macroeconomics. Quoting Olivier Blanchard from his lecture notes to the first year class at MIT:

*“Intermediate textbooks have it right. **It is essential that you read one.....Take this recommendation seriously. If you are not familiar with macroeconomics, then the risk is high that you will perceive the course as a series of methods and models, not as an attempt to understand (short-run macroeconomic) fluctuations.”***

Personally, I couldn't agree with him more. Every concept in your first year macro core sequence can be found in an intermediate textbook. The first year courses will only formalize these ideas with mathematics (most likely math you do not know) and it will be more difficult for you to understand them via math if you do not know them without the math first. Therefore, the goal of these notes is to make you **aware** of some material that you might not remember from your undergrad days. Finally, I think you will find that graduate macroeconomics is actually more FUN the better you know the basics.

## A Few Comments

1. The reason I want you to answer these questions is that we are often so bogged down in mathematics that we don't “see the forest from the trees.” And, what is the point of deriving lots of mathematics if you don't understand the big picture behind why you are doing it in the first place.
2. Don't panic if you don't know them. More than likely, your fellow students feel the same way. The point is for you to pick it up.....quickly!
3. Also, note that this handout is **NOT** designed to teach you these ideas only to make you aware of them while reading an intermediate text. Notice also that I am intentionally not supplying you the answers!
4. Next, when you are answering a question involving lots of mathematics, remember that the author (and the professor) are asking you this question for a reason. What is the main point or objective of the problem in words? What is the problem trying to tell us at a 300/undergrad-level about the macroeconomy (or microeconomy)?

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\*Not to be turned in!

## 1 Basic Aggregate Demand and Supply Questions:

(I'm drastically oversimplifying here.) Business cycles at the 300-level are explained by two main schools of thought, the "Classical" point of view and the "Keynesian" point of view which we should really consider to be two ends of a spectrum. At the graduate level, it is inappropriate to simplistically lump these ideas into two groups because modern macroeconomics accepts ideas from both schools as valid. However separating the ideas is still useful from a teaching perspective. The point here is there are many differences between these schools that we need to know.

1. What is the ONE major difference between these two schools of thought? Hint: how quickly do prices adjust and what implications does this have for the economy in the short run!!
2. What is the difference between a demand shock and a supply shock? Can you give some practical examples?
3. What is monetary neutrality? What does the concept of monetary neutrality have to do with the speed of price adjustment? (see question 5.2 from problem set #1)
4. What causes the AS curve to be horizontal in the Keynesian point of view?
5. What causes the AS curve to be vertical in the long run?
6. What does the slope of the AS curve imply about the effectiveness of monetary policy? i.e. if prices did adjust quickly, what would happen?

## 2 Basic IS-LM Questions:

1. How many markets are being modeled in the standard 300-level IS-LM model?
2. In the standard 300-level IS-LM model, which variables are endogenous and which are exogenous?.....ask yourself this same question about the IS-MP model in Chapter 5 of Romer!!!!
3. Give an example of partial equilibrium in this model.
4. In which market is output determined? In which market is the interest rate determined?
5. How do you graphically derive the IS curve from the goods market graph in the IS-LM model?
6. How do you graphically derive the LM curve from the money market graph in the IS-LM model?
7. Which interest rate is modeled in the IS-LM model, the nominal interest rate or the real interest rate?
8. The IS-LM model focuses on the demand for money and this story is about real money demand and **NOT** nominal money demand. What is real money demand and real money supply? Can you explain this intuitively?
9. How is the AD curve derived from the IS-LM model?
10. Why does the AD curve slope downward in the IS-LM model?.....in the IS-MP model in Chapter 5 of Romer?
11. What factors cause the IS curve to shift?

12. What factors cause the LM curve to shift?
13. In a good 300-level macro textbook (for example Dornbusch, Fischer, and Startz or Mankiw), what factors affect the slope of the IS and LM curves?
14. Why does the slope of the LM curve matter? For the effectiveness of monetary policy?
15. What is a liquidity trap? What does a vertical LM curve imply?

### 3 Practice IS-LM Question:

1. The IS equation is typically expressed:

$$Y = E(Y, r, G, T) \tag{1}$$

Which variables are exogenous? Sign each of the partial derivatives and explain.

2. Noting that the LM equation is expressed:

$$\frac{M}{P} = L(r + \pi^e, Y) \tag{2}$$

where  $L_{r+\pi^e} < 0$  and  $L_Y > 0$ , determine the short run effects of a decrease in money supply on the real interest rate and output level.

3. Suppose the marginal propensity to consume (MPC) increases. How does this development affect the IS and/or LM curve? Express your answer mathematically and explain intuitively.
4. Relaxing the assumption of fixed prices, what how the the change in MPC affect the AD curve?
5. Now suppose there is an exogenous increase in government expenditure  $G$ . Compare the effect on equilibrium income before and after the change in MPC.

### 4 Other General Questions:

1. What is a nominal variable vs a real variable?
2. What is an endogenous variable versus an exogenous variable?.....EVERY time you see an economic model you should get in the habit of consciously asking yourself which variables are being modeled endogenously and exogenously, how are they being modeled, etc.....