Questions 1 – 2 refer to the following.

The amount of currency (in the hands of the non-bank public) is $3,000.
The amount of deposits is $10,000.
The required reserve ratio is 0.10.
Excess reserves are $1000.

1. What is the value of reserves?
   a. $1,000
   b. $2,000
   c. $3,000
   d. $4,000
   e. $5,000

2. What is the value of the monetary base?
   a. $1,000
   b. $2,000
   c. $3,000
   d. **$5,000**
   e. none of the above

3. From 1933 – 1935, there were a number of developments that improved the state of the economy. Which of the following had no immediate impact, but made a profound contribution to the long-term stability of the banking system?
   a. The New Deal programs
   b. The US purchases of gold on the open market
   c. The transferal of the power to change the reserve requirement ration from Congress to the Fed
   d. The creation of the Federal Deposit Insurance Corporation (FDIC)
   e. All of the above

4. The rapid decline in aggregate demand observed in March of 1937 was likely caused by
   a. The payment of the Soldier's Bonus to WWI veterans
   b. The Fed doubling the reserve requirement ratio
   c. Open market purchases of bonds by the Fed
   d. The establishment of the FDIC
   e. Great Britain abandoning the gold standard

5. When the Fed was created in 1913, the purpose of the Fed was to
   a. ensure the growth rate of the money supply is constant, and the Fed was largely successful at achieving this goal
   b. ensure the growth rate of the money supply is constant, but the Fed failed miserably
   c. to inject reserves into the banking system during times of illiquidity, and the Fed was largely successful
   d. to inject reserves into the banking system during times of illiquidity, but the Fed failed miserably
   e. to aid in the prosecution of drug-related offenses

6. Suppose the desired cash balance ratio (aka money demand) is ½, the money supply is $2000, and the level of real GDP is $1000. What is the price level?
   a. 0.25
   b. 0.5
   c. 1
   d. 2
   e. 4

7. An increase in money demand (aka the desired cash balance ratio) will cause
   a. an increase in aggregate demand
   b. a decrease in aggregate demand
   c. an increase in long run aggregate supply
   d. a decrease in short run aggregate supply
   e. none of the above

8. An increase in money supply will cause
   a. an increase in aggregate demand, and thus higher real GDP in the short run
   b. an increase in aggregate demand, and thus lower real GDP in the short run
   c. a decrease in aggregate demand, and thus higher real GDP in the short run
   d. a decrease in aggregate demand, and thus lower real GDP in the short run
   e. no change in aggregate demand, and no change in real GDP in the short run

9. A decrease in the nominal interest rate would (hint: there are a few steps here)
   a. lower the cost of holding money, and thus lead to a decrease in the price level
   b. lower the cost of holding money, and thus lead to an increase in the price level
   c. increase the cost of holding money, and thus lead to a decrease in the price level
   d. increase the cost of holding money, and thus lead to an increase in the price level
   e. leave the cost of holding money unchanged

10. Suppose there is a decrease in aggregate demand. During the transition from the new short run equilibrium to the new long run equilibrium, what would we observe?
   a. Falling price level, falling real GDP
   b. Falling price level, rising real GDP
   c. Rising price level, falling real GDP
   d. Rising price level, rising real GDP
   e. Rising price level, but no change in real GDP

11. Suppose there is an increase in Long Run Aggregate Supply (perhaps due to a sudden influx of immigrants). As a result, in the long run, we will observe
   a. higher prices and higher real GDP
   b. higher prices and lower real GDP
   c. lower prices and higher real GDP
   d. lower prices and lower real GDP
   e. lower prices and no change in real GDP

12. Prior to Y2K, many people began "currency hoarding", fearing a financial disaster brought on by computer problems. That is, they began to withdraw large sums of money from their checking accounts. This "currency hoarding" would cause
   a. an increase in the money multiplier, and hence an increase in aggregate demand
   b. a decrease in the money multiplier, and hence a decrease in aggregate demand
   c. an increase in the monetary base, and hence an increase in aggregate demand
   d. a decrease in the monetary base, and hence a decrease in aggregate demand
   e. a simultaneous decrease in the money multiplier and increase in the monetary base

13. If for whatever reason, the reserve-deposit ratio were to increase, which of the following would result in the short run?
   a. lower price level and lower real GDP
   b. lower price level and higher real GDP
   c. higher price level and higher real GDP
   d. higher price level and lower real GDP
   e. lower price level and no change in real GDP

14. If for whatever reason, the currency-deposit rate were to increase, which of the following would result in the long run?
   a. higher price level and lower real GDP
   b. higher price level and higher real GDP
   c. lower price level and higher real GDP
   d. lower price level and lower real GDP
   e. lower price level and no change in real GDP

15. Suppose for some wicked reason, that the short run aggregate supply curve is perfectly elastic (horizontal). A decline in aggregate demand would cause which of the following in the short run?
   a. higher prices and real GDP
   b. lower prices and lower real GDP
   c. higher prices and lower real GDP
   d. lower prices and higher real GDP
   e. none of the above

16. An decrease in the reserve requirement ratio will
   a. decrease the monetary base
   b. decrease the money multiplier
   c. increase the desired cash balance ratio
   d. increase aggregate demand
   e. none of the above

17. An open market purchase of bonds by the Fed will
   a. increase the monetary base and thus increase the money supply
   b. decrease the money multiplier and thus decrease the money supply
   c. simultaneously decrease the monetary base and increase the money multiplier, thereby leaving money supply unchanged
   d. increase the monetary base and thus decrease the money supply
   e. both (b) and (d) are correct

18. An increase in the discount rate will, in principle (textbook story)
   a. increase member bank borrowing of reserves, increase the reserve-deposit ratio, and decrease the money supply
   b. reduce the currency -deposit ratio, increase the money multiplier, and thus increase the money supply
   c. decrease member borrowing of reserves, decreases the base, and thus decrease the money supply
   d. increase aggregate demand
   e. both (b) and (d)

19. What is the monetary system currently used in the United States?
   a. **fiat money – dollars have no intrinsic value**
   b. commodity backed money – dollars are backed by gold stored at Fort Knox
   c. commodity based – gold coins circulate as money (hint: do you have any gold in your pocket?)
   d. none of the above
   e. getting colder

20. When it lowers the discount rate, the Fed is signaling it intention to
   a. decrease reserve requirements in the future
   b. lower the money multiplier, by lowering the C/D ratio
   c. increase open market purchases, thereby increasing the money supply
   d. decrease aggregate demand, by decreasing the money supply
   e. both (b) and (d) are correct

21. When we derived the short run aggregate supply curve, we assumed that
   a. input prices are sticky (fixed)
   b. output prices adjust quickly
   c. output prices are sticky (fixed)
   d. both (a) and (b)
   e. both (a) and (c)

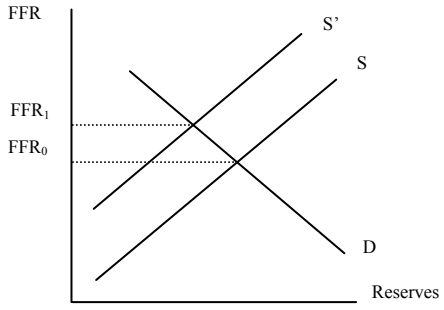
Extra Credit. If you answer this question **correctly, 4 points will be added to your score**. If you answer this question **incorrectly, 4 points will be subtracted** from your score.

22. Which of the following describes the lecture Dr. Robert Barro gave on Friday?
   a. it was sparsely attended (few people attended)
   b. he clearly ran out of time and rushed to finish
   c. he clearly had too much time and tried to stretch to take up the allotted time
   d. both (a) and (b)
   e. both (a) and (c)

Short Answer

1. (6 pts) Suppose the Fed wanted to raise the federal funds rate. How would the Fed go about this? A sketch of any relevant curves would be a plus.

Raise the Discount Rate (DR). If so, according to the textbook story, it would be more costly for member banks to borrow reserves, resulting in fewer reserves in the banking system. This is a decrease in the supply of reserves, which would then increase the FFR. You could also suggest a reduction in open market purchases (or an increase in open market sales) as a way to decrease the supply of reserves.



2. (4 pts) During times of banking panics, the banking system as a whole needs more reserves. True or False – "Federal Funds Rate borrowing is likely to help the banking system out of a panic." Explain your answer briefly.

False. Borrowing using the FFR merely rearranges existing reserves amongst banks. No new reserves are created. If the banking system as a whole needs additional reserves, FFR borrowing will then be ineffective. However, borrowoing from the Fed (using the discount rate) involves the creation of new reserves, and thus is more likely to help.

3. (6 pts) Here's an excerpt from an old Federal Open Market Committee press release (9/24/2002) where the Fed mentions it's goals for monetary policy.

"…its long-run goals of **price stability** and sustainable **economic growth**…"

Pick any Fed monetary policy tool that will improve the economic growth outlook. (An increase in X or a decrease in Y). Then take the same policy and tell me what effect it would have on the price level. For the policy you have chosen -- are these two mentioned goals consistent?

There are number of policies you could have chosen An open market purchase will increase aggregate demand. A reduction in the reserve requirement ratio would increase aggregate demand. A decrease in the discount rate would increase aggregate demand. Any of these is acceptable. These are called expansionary policies, because they increase the money supply (and hence aggregate demand).

But as you can see from simply drawing the standard aggregate demand / aggregate supply graph, any of these policies that increase aggregate demand will necessarily increase the price level.

So while in the short run you can increase economic growth (create an economic boom) it will also increase the price level (reduce price stability). So, the policy goals of the Fed are by their very nature, inconsistent.

More info you weren't required to include on your test:

The idea (as we'll see in class on Monday) is the Fed has to make a tradeoff – it must pick which of these goals it feels is more important at any given time. Right now, inflation is very low, so the Fed seems to be willing to expand the economy at the risk of increasing inflation. A few years ago before the internet bubble bursted, the Fed was concerned about inflation, and was willing to sacrifice economic growth in order to reduce inflation. This is why Alan Greenspan's job is difficult. There is always a tradeoff. Increasing aggregate demand increases GDP, but at the cost of additional inflation. We can reduce inflation, but we must decrease aggregate demand.