MIDTERM EXAMINATION #2 KEY

Instructions:
To be fair in grading, please write only your student ID number on the top of each page of your exam.

Please use the bubble sheet to record your answers from sections 1 and 2.

This exam covers the concepts discussed thus far in the course and problem sets. It consists of short answer definitions and problem solving essays. The exam lasts 75 minutes and is worth 100 points. The possible points for each question is provided for your convenience, use this information to help allocate your time. The space provided is sufficient for a good answer, please keep your answers within this space.

In the problem solving section, show all your work, and whenever you draw a graph, be sure to label the axes and all curves. Partial credit is only possible when calculations are shown. Questions will be graded for accuracy, precision, and completeness. You must write legibly – points will be deducted for illegible answers.

At a minimum, any form of cheating on this exam will result in an F for the course.

Please feel free to ask any clarification questions throughout the exam.

I. True – False (1 point each) – Record your final answers to your bubble sheet, only the answer on the bubble sheet will count (A = True and B = False)

1.) True ___X___ False ___ In its latest Federal Reserve Board meeting the Fed voted to keep the federal funds rate constant.

2.) True _____ False _X___ In its last statement, the Fed indicated that they are likely to increase the federal funds rate in the near future.

3.) True ___X___ False ___ The Fed charges banks different rates to borrow short-term from the Fed but prior to 2003 the Fed charged only one rate.

4.) True _____ False _X___ The Fed achieves a desired Federal Funds Rate by telling banks what rate they must charge on short-term loans to other banks from reserves held at the Fed.

5.) True ___X___ False ___ The Fed achieves a desired Discount Rate by telling banks what rate they must pay on short-term loans when borrowing from the Fed.

6.) True _____ False _X___ Increasing the federal funds rate or the discount rate can be interpreted as expansionary monetary policy.
7.) True _____ False __X___  John M. Keynes, writing around the time of the great depression, advocated that money supply should grow at a fixed rate and that monetary policy should not be used to influence Aggregate Demand.

8.) True __X___ False ______  Employment, as measured by number of payrolls, increased significantly in March.

9.) True ______ False __X___  Since the last US recession, only monetary policy instruments have been used to stimulate aggregate demand, which is one reason why the economy has been slow to recover.

10.) True __X___ False ______ The current federal funds interest rate target is 1%, unemployment is 5.7%, and the growth rate of GDP for the 4th quarter of 2003 was 4.1%.

II. Multiple Choice (2 points each) – choose the best answer. Copy your final answers to your bubble sheet – only the answer on the bubble sheet will count.

11.) The relationship between real GDP and its trend over the business cycle can be best summarized by which of the following statements?
   a) Real GDP is always at its trend.
   b) Real GDP cannot be above its trend.
   c) Real GDP fluctuates around its trend.
   d) None of the above answers is correct.

12.) Moving along the AS curve, when the price level increases the
   a) nominal wage rate increases and there is a decrease in the quantity of real GDP supplied.
   b) nominal wage rate falls and there is an increase in the quantity of real GDP supplied.
   c) real wage rate falls and there is an increase in the quantity of real GDP supplied.
   d) real wage rate increases and there is an increase in the quantity of real GDP supplied.

13.) Which of the following statements is true?
   a) An increase in potential GDP increases aggregate supply and shifts the AS curve to the left.
   b) A decrease in the price level shifts the AS curve to the left.
   c) An increase in the money wage rate shifts the AS curve to the right.
   d) A decrease in potential GDP decreases aggregate supply and shifts the AS curve to the left.

14.) A rise in the price level ____ the buying power of money and ____ the quantity of real GDP demanded.
   a) does not affect; increases  c) raises; decreases
   b) lowers; decreases         d) lowers; increases
15.) If firms' expectations about the future become pessimistic so that they think future profits will be lower, then
   a) the quantity of real GDP demanded decreases and there is a movement up along the AD curve.
   b) aggregate demand increases and the AD curve shifts to the right.
   c) aggregate demand decreases and the AD curve shifts to the left.
   d) the quantity of real GDP demanded increases and there is a movement down along the AD curve.

16.) A tax increase
   a) increases the quantity of real GDP demanded and there is a movement down along the AD curve.
   b) decreases aggregate demand and the AD curve shifts to the left.
   c) decreases the quantity of real GDP demanded and there is a movement up along the AD curve.
   d) increases aggregate demand and the AD curve shifts to the right.

<table>
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<tr>
<th>Price level (GDP deflator)</th>
<th>Real GDP demanded (trillions of 1996 dollars)</th>
<th>Real GDP supplied (trillions of 1996 dollars)</th>
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17.) The above table gives aggregate demand and aggregate supply schedules. Equilibrium real GDP is
   a) $9 trillion.
   b) $10 trillion.
   c) $8 trillion.
   d) $7 trillion.

18.) The above table gives aggregate demand and aggregate supply schedules. If the price level is 120 then the aggregate quantity demanded is ____ than the aggregate quantity supplied and the price level ____ in order to achieve equilibrium.
   a) greater; falls
   b) greater; rises
   c) less; falls
   d) less; rises

19.) If real (actual) GDP exceeds potential GDP, then in the long-run the money wage rate ____.
    aggregate supply ____ and the price level____.
   a) falls; decreases; rises
   b) falls; increases; rises
   c) rises; decreases; rises
   d) rises; increases; falls
20.) Assume the economy is hit by a shock that decreases aggregate demand. In the long-run, when the economy has finally adjusted to full employment,
   a) there will be no changes to either the price level or real GDP.
   b) only the level of real GDP will be affected.
   c) only the price level will be affected.
   d) both real GDP and the price level will be affected.

21.) If aggregate demand increases because of an increase in government purchases of goods and services, real GDP increases more than the initial increase in government purchases because
   a) a deflationary gap is created.
   b) the increase in GDP increases income, which increases households' consumption expenditure.
   c) aggregate supply increases.
   d) None of the above answers is correct.

22.) For a commodity or token to be money it must
   a) be backed by government precious metals, like gold.
   b) be paper.
   c) be accepted in exchange for all other goods and services.
   d) have a double coincidence of wants.

23.) The functions of money are
   a) medium of exchange, the ability to buy goods and services, and the ability to pay off debts.
   b) medium of exchange, unit of account, and store of value.
   c) credit cards, checking accounts, currency, and coins.
   d) medium of exchange, the ability to buy goods and services, and checking accounts.

24.) An official measure of money in the United States is M1, which consists of the sum of
   a) currency plus checkable deposits.
   b) currency plus savings deposits.
   c) currency plus savings deposits plus checkable deposits.
   d) currency plus savings deposits plus time deposits.

25.) The most important policy making body of the Federal Reserve System is the
   a) Federal Open Market Committee.
   b) Board of Advisors.
   c) Board of Presidents of the Federal Reserve banks.
   d) Board of Governors of the Federal Reserve System.

26.) Which of the following Federal Reserve banks carries out the decisions of the FOMC?
   a) the Dallas Federal Reserve bank
   b) the San Francisco Federal Reserve bank
   c) the Kansas City Federal Reserve bank
   d) the New York Federal Reserve bank
27.) The discount rate is the  
   a) name of the interest rate banks charge their most credit-worthy borrowers.  
   b) banks' real interest rate.  
   c) rate banks charge the Fed when the Fed borrows from the banks.  
   d) interest rate that banks must pay when they borrow reserves from the Fed.

28.) If the Fed increases the required reserve ratio, then  
   a) bank customers become more willing to make deposits in banks.  
   b) banks can buy more government securities.  
   c) banks are able to make more loans.  
   d) banks' required reserves increase and their excess reserves decrease.

29.) If the Fed wants to increase the quantity of money to combat a recession, which of the following would the Fed do?  
   a) Increase the discount rate.  
   b) Increase the required reserve ratio.  
   c) Make open market purchases of government securities.  
   d) All of the above.

30.) An increase in the price level leads to a  
   a) movement upward along the demand for money curve.  
   b) rightward shift in the demand for money curve.  
   c) leftward shift in the demand for money curve.  
   d) movement downward along the demand for money curve.

31.) When real GDP increases, people demand ____ money and the demand for money curve shifts ____.  
   a) less; rightward  
   b) more; leftward  
   c) less; leftward  
   d) more; rightward

32.) The supply of money curve is  
   a) vertical because the quantity of money is fixed at any one point.  
   b) horizontal because interest rates are fixed at any one point.  
   c) downward sloping, showing the negative influence of interest rates.  
   d) upward sloping, showing the influence of interest rates.

33.) If the Fed is worried about inflation and wants to raise the interest rate, it  
   a) decreases the supply of money.  
   b) increases the supply of money.  
   c) decreases the demand for money.  
   d) increases the demand for money.

34.) Using the quantity theory of money, in the long run a 3 percent increase in the quantity of money leads to a 3 percent  
   a) decrease in the price level.  
   b) decrease in the real interest rate.  
   c) increase in the price level.  
   d) increase in the real interest rate.
35.) Hyperinflation has
   a) only occurred in textbooks and never in reality.
   b) has not occurred recently.
   c) occurred in Europe in the past and recently in other nations.
   d) only occurred in Europe following both World Wars.

36.) The factors that determine the power of monetary and fiscal policy are
   a) investment demand and the demand for money.
   b) aggregate demand and aggregate supply.
   c) the demand for and supply of money.
   d) unemployment and inflation.

37.) Monetary policy can have a large effect on aggregate demand if the ____ to the interest rate.
   a) supply of money supply is very insensitive
   b) demand for money is very sensitive
   c) demand for money is very insensitive
   d) supply of money is very sensitive

38.) How does fiscal policy affect the interest rate?
   a) If the demand for money is horizontal at a particular interest rate, then an increase in
government purchases directly lowers the interest rate.
   b) When real GDP changes, the demand for money changes, thereby changing the
interest rate.
   c) Fiscal policy affects the interest rate only if the Fed changes the supply of money to
align with the fiscal policy.
   d) All of the above are wrong because fiscal policy has no effect on the interest rate.

39.) The effect of fiscal policy is reduced because an increase in government purchases
   a) leads to higher income and higher tax revenue, which enhances the multiplier effect.
   b) has a multiplier effect of less than one.
   c) leads to higher income and higher taxes, which crowds out private consumption and
investment.
   d) leads to an increase in the demand for money and thereby a rise in the interest rate
that crowds out private investment.

40.) If the crowding-out effect is insignificant and the demand for money is very sensitive to
interest rate changes,
   a) neither monetary policy nor fiscal policy is powerful.
   b) both monetary policy and fiscal policy are powerful.
   c) monetary policy is more powerful than fiscal policy.
   d) fiscal policy is more powerful than monetary policy.

41.) The government does NOT use fiscal policy
   a) to change the money supply.
   b) to redistribute income.
   c) to provide public goods and services.
   d) to stabilize aggregate demand.
42.) Discretionary monetary policy is defined as policy for which 
   a) the markets make all decisions.
   b) policy is based on the judgments of policymakers.
   c) the policy responds to a changing economy with predetermined rules.
   d) the policy is pursued regardless of the current state of the economy.

43.) Some economists, such as the monetarist Milton Friedman, have proposed that the Fed keep 
the money supply growing at a fixed rate. This proposal is a 
   a) combination of feedback and fixed-rule policy.
   b) discretionary policy.
   c) feedback-rule policy.
   d) fixed-rule policy.

44.) Under a fixed-rule policy, a negative aggregate supply shock will lead the Fed to 
   a) decrease the interest rate and increase aggregate supply.
   b) decrease the interest rate and increase aggregate demand.
   c) take no action.
   d) increase the interest rate and increase aggregate supply.

45.) In March 2001, the United States entered a recession. In January 2002, the Chairman of the 
Fed announced the first of several cuts in the discount rate in 2002 to counteract the recession. 
What else would the Fed have done to reinforce these discount rate cuts? 
   a) Increased the required reserve ratio.
   b) Purchased government securities in the open market.
   c) Sold government securities in the open market.
   d) None of the above answers is correct.

46.) An economy is in equilibrium with a price level of 110 and real GDP equal to potential GDP 
of $8 trillion. It experiences a negative supply shock so that the price level rises to 120 and real 
GDP decreases to $7 trillion. If the Fed follows a fixed-rule policy 
   a) be less than 110.
   b) be greater than 120.
   c) equal 110.
   d) equal 120.

47.) An economy is in equilibrium with a price level of 110 and real GDP equal to potential GDP 
of $8 trillion. It experiences a negative supply shock so that the price level rises to 120 and real 
GDP decreases to $7 trillion. If the Fed follows a feedback-rule policy that targets real GDP, in 
the long run, the price level will 
   a) be greater than 120.
   b) be less than 110.
   c) equal 120.
   d) equal 110.
III. (16 points) Business Cycle Fluctuations

a.) Suppose that potential GDP = 500, the price level is 120 and equilibrium GDP is 500. Plot AD, AS, and potential GDP in the figure at right.

b.) Is the economy at, above, or below full employment?
AT FULL EMPLOYMENT

c.) Suppose that Investment drops significantly such that actual GDP is now 400. Illustrate this change in the figure. How would this change in GDP be explained in light of the business cycle?
THIS WOULD BE A POINT BELOW THE TREND OF THE BUSINESS CYCLE – A DOWN TURN AND IT MAY OR MAY NOT BE A TROUGH DEPENDING ON WHETHER GDP DECREASES MORE.

d.) Now suppose that the government uses fiscal policy to move the economy toward full-employment equilibrium. What fiscal policy action could they take? Illustrate the immediate short-run effect of this policy action in your figure above.
DECREASE TAXES AND/OR INCREASE GOVERNMENT SPENDING. THIS WILL INCREASE AD.

e.) In the longer term, this fiscal policy intervention may also have an unintended “crowding-out” effect. In the space below, use figures for the money market and separately for investment demand to illustrate this unintended effect. What determines the strength of this effect?

f.) Under what conditions would one advocate monetary policy over fiscal policy?
MON. POLICY IS MOST EFFECTIVE WHEN MONEY DEMAND IS INSENSITIVE TO INTEREST RATE CHANGES (STEEP) AND INVESTMENT DEMAND IS VERY SENSITIVE TO INTEREST RATE CHANGES (FLAT)

g.) Suppose that there was not fiscal or monetary policy intervention after the decrease in Investment. Explain how the economy would, in the long-run, return to potential GDP. What are some relative advantages and disadvantages of such a policy?
WITHOUT INTERVENTION, AGGREGATE SUPPLY WOULD SHIFT TO THE RIGHT AS REAL WAGES ARE ADJUSTED DOWN – BUT THIS IS A LONG-RUN EFFECT AND WE DON’T KNOW EXACTLY HOW LONG IT TAKES FOR REAL WAGES TO ADJUST DOWNWARDS. ADV: PRICE STABILITY DA: LONG-TIME HORIZON WAGES MAY NOT ADJUST QUICKLY AND IT MAY NOT BE POLITICALLY FEASIBLE.