PRACTICE SECOND EXAM (A) (answers on last page)

During an actual exam, students will be required to sign the following statement:
By signing below, I certify that I have not had any books, notes, calculators, phones, or blank paper on my desk or available in sight at any time during this exam:

__________________________________________ student signature
__________________________________________ date

PART I: MULTIPLE CHOICE—circle the correct answer (4 points each, 44 points total)

1.) According to the simple monetary policy rule, if the rate of inflation is above the Fed’s long-run inflation target, the Fed should
   a.) set the nominal interest rate above the real interest rate
   b.) set the nominal interest rate below the real interest rate
   c.) set the real interest rate above the long-run real interest rate
   d.) set the real interest rate below the long-run real interest rate

2.) If the Fed was following the Taylor Rule, under which of the following conditions would the Fed set the lowest value for the fed funds rate?
   a.) \( \pi > \pi^* \) and \( Y > \bar{Y} \)
   b.) \( \pi < \pi^* \) and \( Y < \bar{Y} \)
   c.) \( \pi > \pi^* \) and \( Y > \bar{Y} \)
   d.) \( \pi < \pi^* \) and \( Y < \bar{Y} \)

3.) What would be the short-run effect on the U.S. of a shock that decreases U.S. exports?
   a.) output would increase and inflation would increase
   b.) output would decrease and inflation would decrease
   c.) output would decrease and inflation would increase
   d.) output would increase and inflation would decrease

4.) An increase in the exogenous component of investment demand \( \bar{a}_i \) would cause the
   a.) AS curve to shift up
   b.) AS curve to shift down
   c.) AD curve to shift up
   d.) AD curve to shift down

5.) If the central bank has more credibility, then
   a.) output drops more and inflation drops more when the Fed lowers its long-run inflation target
   b.) output drops less and inflation drops less when the Fed lowers its long-run inflation target
   c.) output drops more and inflation drops less when the Fed lowers its long-run inflation target
   d.) output drops less and inflation drops more when the Fed lowers its long-run inflation target
6.) Which of the following best summarizes how financial frictions made it hard for the Fed to stimulate the U.S. economy in the fall of 2008?
   a.) the fed funds rate was going up even though the Fed was trying to bring it down
   b.) the fed funds rate was going down even though the Fed was trying to bring it up
   c.) the cost to firms of borrowing was going up even though the Fed was trying to bring it down
   d.) expected inflation was going up even though the Fed was trying to bring it down

7.) Which of the following best characterizes the Great Recession?
   a.) the economy was in a liquidity trap and was in a deflationary spiral
   b.) the economy was not in a liquidity trap and not in a deflationary spiral
   c.) the economy was not in a liquidity trap and was in a deflationary spiral
   d.) the economy was in a liquidity trap and not in a deflationary spiral

8.) The Federal Reserve increased its liabilities by $2.4 trillion between 2009 and 2014. Which of the following is the biggest single category on the liabilities side of the Fed’s balance sheet that accounts for this increase?
   a.) loans to private banks
   b.) bank deposits with the Fed
   c.) cash in circulation
   d.) securities

9.) What was the Fed’s goal in QE1, QE2, and QE3?
   a.) keep interest rates on long-term bonds low
   b.) keep inflation low
   c.) prevent the Fed’s assets from expanding
   d.) prevent the Fed’s liabilities from expanding

10.) Which of the following policy changes would the Federal Reserve make if it wanted to bring about negative nominal interest rates?
    a.) large-scale asset purchases
    b.) charge banks a fee for their deposits with the Fed
    c.) increase the growth rate of the money supply
    d.) set the marginal product of capital to a negative value

11.) Some have suggested that higher capital requirements might be a way to reduce moral hazard in the banking system. Which of the following would be a measure that a bank could take that could help it meet higher capital requirements?
     a.) lend out more of the funds in its account with the Fed rather than leave the funds idle
     b.) sell some of its loans in order to increase the funds in its account with the Fed
     c.) reduce dividends paid to stockholders
     d.) buy more foreign securities
PART II: FILL IN THE BLANK (6 points total)

12.) (6 points) The following gives the balance sheet for a hypothetical central bank. Show how the numbers would change if the central bank were to make 100 more in new emergency lending without any offsetting open-market operations.

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans to banks 400</td>
<td>Deposits with central bank 100</td>
</tr>
<tr>
<td>Securities 400</td>
<td>Cash in circulation 800</td>
</tr>
<tr>
<td>Other 200</td>
<td>Other 100</td>
</tr>
</tbody>
</table>
PART III: SHOW YOUR ANSWER ON A GRAPH (40 points total)

13.) (40 points total) You are asked to fill in the details on the graph below so that it shows the effect in an aggregate supply/aggregate demand diagram if there is a big decrease in oil prices. Assume that the economy starts out in period 0 in long-run equilibrium in which the marginal product of capital is 1% and the Fed’s long-run inflation target is 2%.

   a.) (20 points) Label the variables that are being measured on the horizontal and vertical axis so that the graph would correspond to an AS-AD diagram. Show the initial position of the AS and AD curves before there is any change in oil prices, labeling these as “AS₀” and “AD₀”. Indicate on your graph the numerical values for the variables on the horizontal and vertical axis in the initial equilibrium.

   b.) (6 points) Represent the effect of the oil price change as a negative value for δ in period 1 after which we go back to δ = 0 for periods 2 and 3. Draw the AS and AD curves for period 1, labeling these as “AS₁” and “AD₁”.

   c.) (4 points) Draw the AS and AD curves for period 2, labeling these as “AS₂” and “AD₂”.

   d.) (4 points) Draw the AS and AD curves for period 3, labeling these as “AS₃” and “AD₃”.

   e.) (6 points) Label the point at which the economy would be in period 3 as point “E”, making sure it is very clear from your graph where point “E” is relative to the point at which the economy started out in part (a) on both axes.
Answers:
1c 2b 3b 4c 5d 6c 7d 8b 9a 10b 11c 12 loans up 100 deposits up 100

At $E$, $\bar{Y} > 0$ and $\pi < 2$