PART I: MULTIPLE CHOICE  

Circle the best answer to each question. Each question is worth 3 points.

1. The sharp fall in inflation in the United States in the early 1980s is generally attributed to:
   - a. Large tax cuts under Ronald Reagan.
   - b. Tax increases to reduce the budget deficit under George H. W. Bush and Bill Clinton.
   - c. Tight monetary policy under Paul Volcker.
   - d. Favorable inflation shocks.

2. Suppose that initially $Y > \bar{Y}$. As the economy moves to long-run equilibrium:
   - a. Inflation rises.
   - b. Output falls.
   - c. The real interest rate rises.
   - d. (a) and (b).
   - e. All of the above.

3. In “Japanese Monetary Policy: A Case of Self-Induced Paralysis?” two of the policies that Ben Bernanke suggests would help improve the condition of the Japanese economy are:
   - a. “Depreciation of the Yen” and “Money-Financed Transfers.”
   - b. “Greater Investment in R&D” and “Recapitalization of Banks.”
   - c. “Massive Infrastructure Spending” and “Reducing Trade Barriers.”
   - d. “Commitment to Zero Rates—with an Inflation Target” and “Limits on Immigration.”

4. In the United from 1933 to 1941, the unemployment rate:
   - a. Was fairly steady at around 5%.
   - b. Was fairly steady at around 20% until 1939, and then fell rapidly.
   - c. Fell rapidly from 1933 to 1937, rose sharply in 1938, and then fell rapidly until 1941.
   - d. Rose gradually from 1933 to 1937, then fell rapidly from 1937 to 1941.
5. In the extension of the IS–MP–IA model to include the zero lower bound, the “kink” in the AD curve occurs at:
   a. The inflation rate given by the IA curve.
   b. The inflation rate that causes the IS and MP curves to intersect at the “kink” of the MP curve.
   c. $Y = \bar{Y}$.
   d. $\pi = 0$.
   e. (c) and (d).

6. In our models, “$\pi^e$” means:
   a. The profits of entrepreneurs.
   b. Expected inflation.
   c. Real money balances.
   d. 3.14159… raised to the 2.71828… power.

7. Suppose a variable, $y$, is determined by a factor we can measure, $x$, and by other factors, $e$. That is, $y = a + bx + e$, where $a$ and $b$ are parameters. Estimates of $b$ from a regression (estimated by “ordinary least squares”) will tend to overestimate the impact of $x$ on $y$ if:
   a. $x$ and $e$ are negatively correlated (that is, $e$ tends to be low when $x$ is high, and high when $x$ is low).
   b. $x$ and $e$ are uncorrelated (that is, $x$ has no consistent relationship with $e$).
   c. $x$ and $e$ are positively correlated (that is, $e$ tends to be high when $x$ is high, and low when $x$ is low).
   d. $a$ and $x$ are positively correlated.

8. The following periods are listed in order from least to greatest macroeconomic volatility:
   e. None of the above.

   a. Narrative evidence from newspaper accounts of people’s reactions to the Recovery Act.
   b. Comparisons of actual outcomes with the predictions of a simple statistical forecast.
   c. Estimates from economic models.
   d. Information about stimulus spending and economic outcomes in different countries.
   e. Information about stimulus spending and economic outcomes in different states.
10. If the central bank is targeting the money supply, an increase in government purchases:
   a. Shifts the LM curve up.
   b. Shifts the LM curve down.
   c. Does not affect the LM curve.
   d. It is not possible to tell.

**PART II: TRUE, FALSE, OR UNCERTAIN [30 POINTS TOTAL]**

For each of the following, decide whether the statement is true, false, or uncertain and explain why. Your explanation determines your grade; you will receive no credit for an answer without an explanation. Use diagrams where appropriate. Note: We have given you a full page for each answer so that you have plenty of room to write. We do not expect answers to take up the whole page.

11. “When monetary policy is at the zero lower bound, the central bank has tools that can increase output by shifting the IS curve, but does not have tools that can raise output by shifting the MP curve.” [10 points]

12. “The fact that GDP rose by less than G did in World War II and in the Korean War is strong evidence that government purchases have little effect on output.” [10 points]

13. “In the short run, an increase in consumer confidence raises the real interest rate, consumption, investment, and real GDP.” [10 points]

**PART III: PROBLEM [20 POINTS TOTAL]**

Answer both parts of the question. Be sure to explain your answers and to draw diagrams where they are appropriate. Your explanation and analysis determine your grade.

14. Suppose the central bank is following the interest rate rule, \( i = \pi + gy + h(\pi - \pi^*) + rf \). (The notation is the same as in lecture: \( i \) is the nominal interest rate, \( \pi \) is inflation, \( y \) is the deviation of output from trend, \( \pi^* \) is the central bank’s target rate of inflation, and \( rf \) is the equilibrium real interest rate. \( g \) and \( h \) are parameters.) Now suppose the central bank reduces the value of \( g \) from a positive value to zero.
   a. With this change in how monetary policy is conducted, will an increase in government purchases have a larger effect on output than before, a smaller effect, or the same effect (or is it not possible to tell)? Explain your answer. [10 points]

   b. How would the change in \( g \) from a positive value to zero affect the AD-IA diagram? Explain your answer. [10 points]
15. From 1933 to 1937, real GDP in the United States rose by 43%. Describe two factors that contributed to this rapid growth, and explain how each one helped to raise output.

You should structure your answer in the form of an essay. It should have a logical structure, complete sentences, and good analysis. In your discussion, you should use diagrams and cite empirical evidence as appropriate.