Sketch of Answers to the Midterm.

1) From pg. 35 of the C. Romer article:
“One is the rise of automatic stabilizers. The emergence of a significant income tax during and after World War II has made government revenues more procyclical; the emergence of unemployment compensation in the 1930s and the evolution of federal and state welfare programs between the 1930s and the 1960s have led government spending to have a noticeable automatically countercyclical component. These two features have yielded an actual government budget surplus that is decidedly procyclical in the postwar era.”

2)

\[ i_{d_1} = \frac{2i_{2_1} + 2i_{e_{2,2,2}}}{4} \]

Plug in the values given and solve.

\[ i_{e_{2,2,2}} = 12\% \]

3) According to the tax-smoothing hypothesis, the tax cut is probably a bad idea. In the Ramsey problem, taxes are distortionary (create deadweight loss) and so a benevolent government that is generating revenue to satisfy a given path of spending will try to minimize those distortions (or maximize household utility) subject to satisfying its intertemporal budget constraint. The solution to that problem is to smooth taxes across time.

4) Under Volcker, the Fed switched to targeting broad money aggregates and non-borrowed reserves derived to be consistent with three-month growth rates of M1 (initially). This was in response to the high inflation of the 1970s and the suggestion that targeting the Federal Funds rate led to overshooting of monetary objectives.

5) You need to set up and solve the Lagrangian (similar to #1 of the Sample Question about fiscal policy). Solving the Lagrangian with the given parameter values gives

\[ c1 = c2 = c3 \approx 1.115 \]
6) The tradeoff in question is the “inflation/output” or “inflation/unemployment” tradeoff known as the Phillips Curve. The argument is that policy-makers believed that the Phillips Curve was an exploitable tradeoff, when in fact it was not.

7) Discuss the money supply process as described in class or in the Hubbard ch. 17. The erratic growth rate of the money supply would likely be due to excess reserves caused by the lowering of reserve requirements or possibly currency holdings.