Question 11 (5 points)

Question 11.a (2.5 points)
In the stage three of the financial crisis, the economic downturn leads to a sharp decline in the price level. The huge decline in price triggers a debt deflation, in which net worth falls because of the increased burden of indebtedness borne by firms and households. This decline in net worth and the resulting increase in adverse selection and moral hazard problems in the credit markets is another reason for the leftward shift of the aggregate demand curve in Figure 1 from AD3 to AD4.

With the slack in the economy, over time the short-run aggregate supply curve has shifted further downward and to the right to AS4, moving the economy from Point 3 to Point 4, indicating a small improvement in the aggregate demand. Overall, a prolonged economic contraction results in a decrease in output and a decrease in inflation, and a decrease in inflation leads to a rise in unemployment.
**Question 11.b** (2.5 points)
If the goal of the central bank is to stabilize output, the central bank can undertake autonomous easing of monetary policy in response to a drop in output in Figure 2 from Point 3 to Point 4. This expansion of money supply will lead to a decrease in real interest rates at any given level of inflation. As a result, aggregate demand increases and thus the AD curve in Figure 2 shifts to the right from AD4 to AD5. Therefore, output will increase.
**Question 12 (5 points)**

Ricardian Equivalence proposes that when households are rational and forward-looking, they anticipate that a fiscal expansion will be followed by an increase in taxation in the future. In this case, households will increase saving to prepare for the future tax hike. Thus, private saving rises as a result of a fiscal expansion, and this implies a fall in consumption expenditure. The fall in consumption expenditure then cancels out the fiscal expansion completely. For this reason, when Ricardian Equivalence holds, the AD curve does not respond to fiscal policy at all.

**Question 12.a (2.5 points)**

In this question, we assume that Ricardian Equivalence does not hold, therefore fiscal policy can shift the AD curve. This implies that policy makers can use a fiscal expansion to stabilize output in response to a financial crisis. To stabilize output in the short run, the government can increase government spending or reduces income tax. Both policies can shift the AD curve in Figure 3 to the right from AD4 to AD5.
Question 12.b (2.5 points)
Since we assume that Ricardian Equivalence holds in this question, fiscal policy cannot shift the AD curve. However, the government can use a supply-side tax cut, which encourage firms to invest in new technology to lower the cost of production. That will shift the AS curve in Figure 4 to the right from AS4 to AS5. As a result, this policy will increase output.