1. An economy is in long-run equilibrium when output equals potential output. Why is there no long-run equilibrium rate of potential inflation?

Potential output is a real variable determined by the economy’s productive resources. When output deviates from potential, the temporary tightening or loosening in labor and other input markets causes upward or downward pressure on prices. Barring inflationary or deflationary spirals, changes in inflation cause output to approach potential output. Changes in output do not cause inflation to remain near or to approach any particular rate. On the contrary, inflation will be driven continually higher or lower as long as an output gap persists, and the economy may reach potential output and stable inflation at any inflation rate.

2. According to the economy’s self-correcting mechanism, how does the economy return to potential output following a negative demand shock? How is the recovery process different, if the government implements a policy of economic stimulus?

The negative demand shock causes output to decline, which causes a negative output gap, which causes inflation to decline. Then, expected inflation adjusts down, shifting the short-run aggregate supply curve along the (new) aggregate demand curve: lower inflation causes an automatic response of monetary policy to lower the real interest rate, which stimulates planned expenditures, causing output to rise and the output gap to shrink (in absolute value). The short-run aggregate supply curve will continue to shift down until the output gap is eliminated.

A demand stimulus shifts the aggregate demand curve back to the right, closing the output gap more quickly, so inflation does not fall as much (perhaps, not at all), so the short-run aggregate supply curve does not shift down as much (perhaps, not at all).

3. The Volcker Disinflation (1980-1986) was costly in terms of output and unemployment. Would it not have been better to reduce inflation with a positive supply shock, rather than a negative demand shock?

Probably, but a positive supply shock is a difficult to achieve policy goal. A permanent supply shock -- shifting the long-run aggregate supply curve to the right -- would require an increase in potential output, which is not a policy variable in the
short run. A temporary supply shock was, in fact, attempted: public declarations of anti-inflationary intent to lower expected inflation. Though temporary, such management of expectations would result in a permanent decrease in inflation, since the consequence would be to move the economy to (rather than away from) potential output. In practice, the best one might hope is that adjustment of expectations in the wake of a negative demand shock will reduce the intensity and duration of the declines in output and employment.

4. In his first State of the Union speech in January 2010, President Obama proposed a tax credit for small businesses and tax incentives for all businesses that invest in new plant and equipment.

a) What is the anticipated effect of these proposals on aggregate demand, if any?
In general, these proposals will reduce the tax burden on small businesses and encourage businesses to hire more employees and to increase investment. More employment will result in higher consumption and planned expenditure, as new employees spend their wages. Investment spending should also increase due to the tax incentives.

b) Show your answer graphically.
Graphically, the aggregate demand curve will shift to the right, since the equilibrium level of output will increase at any given inflation rate.
5. Evaluate the accuracy of the following statement: "The recent (from December 2008 to December 2009) depreciation of the U.S. dollar had a positive effect on the U.S. aggregate demand curve."

The statement is correct. A depreciation of the U.S. dollar makes U.S. exports cheaper for foreign consumers at the same time it makes imports into the U.S. more expensive. As a result, exports increase, imports decrease, and net exports increase. According to aggregate demand and supply analysis, the aggregate demand curve shifts upward and to the right. Note that the depreciation of the U.S. dollar might also affect the short-run aggregate supply curve if U.S. firms import many of their inputs. An increase in the price of inputs will shift the short-run aggregate supply curve up and to the left.

6. Oil prices declined in the summer of 2008, following months of increases since the winter of 2007. Considering only this fall in oil prices, explain the effect on short-run aggregate supply and long-run aggregate supply, if any.

The decrease in oil prices made production possible at lower costs by decreasing the price of energy, transportation, and a number of raw materials. It therefore lessened pressure for firms to raise prices, reducing inflation at every equilibrium level of output. Graphically, the short-run aggregate supply curve shifted downward and to the right. Since neither technology nor factors of production were affected by this price shock, the long-run aggregate supply curve remained unchanged.