

## Midterm 2 Solution Key

### Economics 105 (Fall 2000)

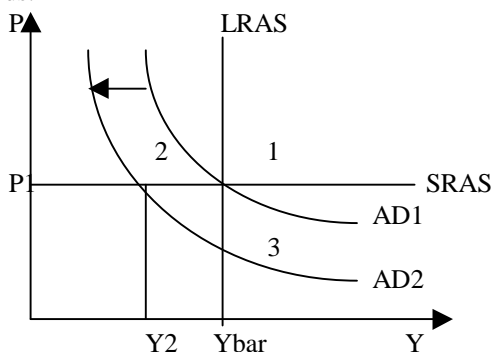
**Regrade policy:** If you would like your test regraded, please submit a written statement to explain why. Your entire test will be regraded, so there is a possibility that points could be lost rather than gained.

**Multiple Choice:**

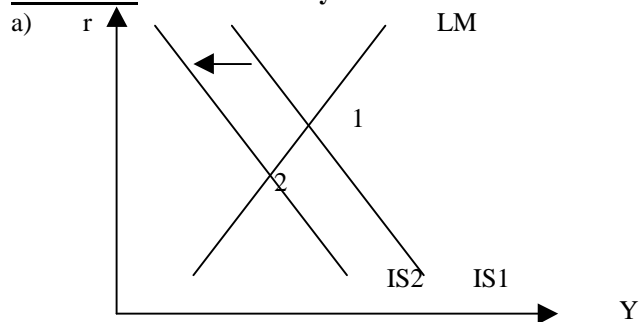
- 1) a    2) b    3) d    4) d    5) c    6) d    7) c    8) c    9) b    10) d

**Problem 1: AS-AD**

A permanent fall in the level of velocity means that fewer transactions can be carried out in dollar terms, so fewer things will be bought at the given price level. This is a leftward shift in the AD curve (fall in  $Y$  for a given  $P$ ). As the price level is fixed in the short run (horizontal aggregate supply curve), this would lower equilibrium output and therefore, generate a recession (point 2). In the long run prices will decrease and equilibrium output will be restored to the original level (point 3). At a lower price level, fewer dollars worth of transactions are needed to buy the goods.



**Problem 2: IS-LM and Keynesian Cross**



b)  $r$  decreased,  $Y$  decreased,  $I$  increased,  $C$  decreased

c) In the previous case, where investment depended on the interest rate, the fall in the equilibrium interest rate caused an increase in the level of investment. This rise in investment expenditure moderated the effects of the fall in government expenditure. As  $Y=C+I+G$ , a decrease in  $Y$  is less than a decrease in  $G$  times the multiplier. In the case given here, where investment does not depend on the interest rate, we are simply going back to the original Keynesian Cross case we studied in class. The cut in government spending and fall in interest rate have no effect on investment. So  $Y$  decreases by the full multiplier effect, which is more than in the previous case. As consumption is a function of income, this means that consumption will also decrease by more. Also, for the given money supply, the interest rate will have to fall by more in order to maintain money market equilibrium in the face of a bigger decrease in the output.

d) If government decreases government expenditures and taxes, then the change in output will be:

$$\Delta Y = [1/(1-MPC)](\Delta G) - [MPC/(1-MPC)](\Delta T)$$

To keep output constant set  $\Delta Y=0$ . Then,

$$\Delta G = MPC \Delta T$$

$$\Delta T = \Delta G / MPC = -10 / .75 = -13.33 \text{ So taxes must be cut } \$13.33 \text{ billion.}$$

As consumption is a function of taxes, a decrease in taxes will lead to an increase in consumption. The joint fiscal policy cancels out any shift in the IS curve, so the interest rate and hence investment do not change.