

Name \_\_\_\_\_ Student ID \_\_\_\_\_

Section day and time \_\_\_\_\_

## Midterm 2 - Economics 101 (Fall 2009)

You will have 45 minutes to complete this exam. There are 5 pages and 63 points. Version A.

---

**Multiple Choice:** (16 points total, 2 points each) Choose best answer and record in blanks below.

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ 7 \_\_\_\_\_ 8 \_\_\_\_\_

- 1) The quantity theory of money says money supply multiplied by velocity equals:
  - a) inflation
  - b) nominal interest rate
  - c) price
  - d) nominal GDP
- 2) The classical dichotomy:
  - a) says nominal variables do not affect real variables
  - b) say real variables do not affect nominal variables
  - c) holds mainly in the short run but not in the long run
  - d) all of the above
- 3) Suppose money growth in Sweden in 2008 was 2%, GDP growth was 3%, the real interest rate was 4%, and velocity was constant. According to the quantity theory of money, inflation should be.
  - a) 5%
  - b) 2%
  - c) 1%
  - d) -1%
  - e) none of the above
- 4) According to the Fisher Effect, if money growth rises in Sweden in the problem above, this should lead to a:
  - a) fall in the nominal interest rate
  - b) fall in the real interest rate
  - c) rise in the nominal interest rate
  - d) rise in the real interest rate
- 5) In the simple AS-AD model studied in class, an important distinction between the short run and long run is that \_\_\_\_\_ is sticky in the short run, but flexible in the long run.
  - a) velocity
  - b) interest rate
  - c) price level
  - d) output
- 6) In the simple AS-AD model, a permanent fall in money velocity leads to a \_\_\_\_\_ in output in the short run, and a \_\_\_\_\_ in price level in the long run.
  - a) rise, rise
  - b) rise, fall
  - c) fall, rise
  - d) fall, fall
- 7) In the IS-LM model, if we assume people don't care very much about the interest rate when deciding how much money to hold, this makes the \_\_\_\_\_.
  - a) IS curve steeper
  - b) IS curve flatter
  - c) LM curve steeper
  - d) LM curve flatter
- 8) In the question above, this assumption about money demand means that a fiscal stimulus raising government spending will have a \_\_\_\_\_ effect on output and a \_\_\_\_\_ effect on the interest rate.
  - a) bigger, bigger
  - b) smaller, bigger
  - c) bigger, smaller
  - d) smaller, smaller

---

**Problem 1: Keynesian Cross** (12 points total)

Suppose consumption in the economy can be described by the consumption function:  $C = 20 + 0.8(Y - T)$ , where  $Y$  is total national income and  $T$  is exogenous lump-sum taxes. Assume that investment is exogenous, so it is not a function of the interest rate.

- a) (7 points) Suppose the president wishes to raise GDP by \$100 billion. Use the Keynesian Cross analysis to compute what change in taxes should be proposed in order to achieve this result.

- b) (5 points) If the president wishes to raise GDP by \$100 billion in a way that has the smallest impact on the budget deficit, should he use the tax policy above, or a policy that changes government purchases instead of taxes? Explain in a couple of sentences the economic reason for why or why not.

---

**Problem 2: IS-LM AS-AD Model** (22 points total)

Suppose that there is a permanent rise in money supply by the Federal Reserve. Use the IS-LM/AS-AD model to analyze the effects in the short run and long run. (Make the usual IS-LM assumptions here: that investment is a function of the interest rate alone, consumption is

a function of disposable income alone, money demand is a function of both the interest rate and income. Assume a completely horizontal SRAS curve.)

- a) (11 points) Use the IS-LM and AS-AD graphs to show the short run and long run equilibria following this policy. Assume the usual case where the short run aggregate supply curve (SRAS) is completely horizontal. Be sure to label the axes and curves, use arrows to show shifts in curves, and mark the equilibrium points: 1 for the initial equilibrium, 2 for the short run equilibrium, and 3 for the long-run equilibrium. Briefly explain the economic reason for each curve shift.

- b) (6 points) What happens to the following variables in the short run:
- |                        |         |         |              |              |
|------------------------|---------|---------|--------------|--------------|
| ___ output:            | a) rise | b) fall | c) no change | d) ambiguous |
| ___ interest rate:     | a) rise | b) fall | c) no change | d) ambiguous |
| ___ investment:        | a) rise | b) fall | c) no change | d) ambiguous |
| ___ consumption:       | a) rise | b) fall | c) no change | d) ambiguous |
| ___ price level:       | a) rise | b) fall | c) no change | d) ambiguous |
| ___ real money demand: | a) rise | b) fall | c) no change | d) ambiguous |

- c) (5 points) What happens in the long run? For each of the variables below, state if it returns in the long run to its initial equilibrium value (point 1 on your graphs), if it is higher in the long run than its initial level, or if it is lower:
- |                        |                              |           |          |
|------------------------|------------------------------|-----------|----------|
| ___ output:            | a) initial equilibrium value | b) higher | c) lower |
| ___ interest rate:     | a) initial equilibrium value | b) higher | c) lower |
| ___ investment:        | a) initial equilibrium value | b) higher | c) lower |
| ___ price level:       | a) initial equilibrium value | b) higher | c) lower |
| ___ real money supply: | a) initial equilibrium value | b) higher | c) lower |

**Problem 3: IS-LM Short run model** (13 points total)

Suppose Japan experiences a recession where:

- 1) investment is falling and
- 2) real interest rates are rising.

Given this information and the usual assumptions of the IS/LM model (as listed in the first paragraph of problem 2 above) what might cause such a recession? Consider the list of economic shocks listed below, and check the box for all those that could be a potential cause of the recession here (there may be more than one, or there may be none).

- Rise in taxes (the usual lump-sum taxes studied in this class)
- Exogenous rise in real money demand (shift in money demand curve: rise in real money demand for any given interest rate or output level)
- Exogenous fall in investment (Shift in investment curve: fall in investment for any given interest rate, due to a fall in business confidence)

Explain your logic in a paragraph. In particular, for each case you said could NOT be an explanation, note all the implications of that shock that are in conflict with the data given above. Feel free to use graphs or equations to support your argument. Note that the majority of the points for this problem are for the explanation.

11/16/09

---