

Midterm 1

The total time for the exam is 60 minutes, although you are given 70 minutes to complete it. Points are allocated proportionally to the time allocations.

Part I: Multiple Choice (27 minutes)

1. Under fixed exchange rates
 - a. the rate will always be equal to the intersection of private supply and private demand for foreign exchange.
 - b. the central bank *must* buy and sell foreign currency at the official exchange rate.
 - c. exchange rates must be highly volatile.
 - d. central bank intervention in foreign exchange markets is not required.
 - e. none of the above.

2. In the Keynesian open-economy model (when both net income and international transfers are zero), the trade balance is equal
 - a. investment.
 - b. savings minus investment.
 - c. income minus consumption.
 - d. national savings.
 - e. none of the above.

3. In an IS-LM model monetary policy is *ineffective* when
 - a. money demand is completely interest insensitive.
 - b. the marginal tax rate is zero.
 - c. investment is completely interest insensitive.
 - d. investment is infinitely interest sensitive.
 - e. none of the above.

4. A country is running a current account (CA) deficit. Which of the following is be true if the private financial account (FA) equals zero?
 - a. The central bank is reducing its holdings of foreign assets, but its residents are not reducing their holdings of foreign assets.
 - b. The central bank is increasing its holdings of foreign assets, but its residents are not reducing their holdings of foreign assets.
 - c. Official reserves transactions are zero and its residents are acquiring foreign assets.
 - d. Official reserves are unchanging.
 - e. None of the above.

5. If the elasticity of export and import demands are 0.7 and 0.4 respectively, and the country initially has balanced trade, a devaluation will lead to
 - a. a trade surplus.
 - b. a trade deficit.
 - c. an import revenue decrease.
 - d. a decline in export revenue greater that the decline in import revenue.
 - e. none of the above.

6. In a two country Keynesian model,
- an increase in government spending results in a larger increase in output than in a one-country model.
 - an increase in government spending results in a smaller increase in output than in a one-country model.
 - an increase in government spending results in a larger decrease in the trade balance than in a one-country model.
 - an increase in government spending results in a smaller decrease in the trade balance than in a one-country model.
 - (a) and (d)
- 7 In an IS-LM model, an increase in government spending has the same impact upon income as it does in the simple Keynesian model when
- the IS curve is flat.
 - the IS curve is vertical.
 - the LM curve is flat.
 - the LM curve is vertical.
 - (b) and (c).
8. If the marginal propensity to save is 0.2 and the marginal propensity to import is 0.3, then a \$200 billion dollar increase in government spending will increase equilibrium income by what amount in the simple Keynesian model (with the marginal tax rate equal to zero).
- \$400 billion.
 - \$200 billion.
 - \$100 billion.
 - \$60 billion.
 - \$40 billion.
9. A revaluation usually
- lowers the price paid by foreigners for domestic exports and raises the price of imports.
 - raises the price paid by foreigners for domestic exports and raises the price of imports.
 - raises the price paid by foreigners for domestic exports and lowers the price of imports.
 - lowers the price paid by foreigners for domestic exports and lowers the price of imports.
 - does not change the price paid by foreigners for domestic exports and lowers the price of imports.

Part II: Short Answer (33 minutes)

Suppose the real side of the economy is given by:

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| (1) | $Y = AD$ | Output equals aggregate demand – an equilibrium condition |
| (2) | $AD \equiv C + I + G + EX - IM$ | Definition of aggregate demand |
| (3) | $C = \bar{C}\bar{O} + c(Y - T)$ | Consumption function, c is the marginal propensity to consume |
| (4) | $T = \bar{T}\bar{A} + tY$ | Tax function; $\bar{T}\bar{A}$ is lump sum taxes, t is tax rate. |
| (5) | $I = \bar{I}\bar{N} - bi$ | Investment function |
| (6) | $G = \bar{G}\bar{O}$ | Government spending on goods and services |
| (7) | $EX = \bar{E}\bar{X}\bar{P} + vq$ | Export spending |
| (8) | $IM = \bar{I}\bar{M}\bar{P} + mY - nq$ | Import spending |

And the monetary side given by:

- (9) $i = -\left(\frac{1}{h}\right)\left(\frac{\bar{M}}{P}\right) + \left(\frac{k}{h}\right)Y$ LM curve

1. (5 minutes) Solve for the IS curve
2. (5 minutes) Solve for equilibrium income.
3. (5 minutes) Calculate the change in income resulting from an increase in lump sum taxes, holding all else constant.
4. (5 minutes) Calculate the change in income resulting from a change (depreciation) in the real exchange rate, holding all else constant.

Suppose the economy is also governed by a BP=0 schedule.

$$(10) \quad \boxed{i = -\left(\frac{1}{\kappa}\right)[(\overline{EXP} - \overline{IMP} + \overline{KA}) + (n + v)q] + \bar{i}^* + \left(\frac{m}{\kappa}\right)Y} \quad \langle \text{BP}=0 \text{ curve} \rangle$$

5. (5 minutes) Draw a graph of initial equilibrium, where the goods and money markets are in equilibrium, as is the balance of payments, assuming that $m/\kappa < k/h$. Then show what happens if the government cuts the *tax rate*, both immediately, and over time, assuming no sterilization.
6. (8 minutes) At the new equilibrium, what is true about (i) the level of output; (ii) the level of investment; (iii) the real exchange rate; and (iv) the trade balance.