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 (30 minutes)**

1. 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.

2. In a two country Keynesian model,
   a. an increase in government spending results in a larger increase in output than in a one-country model.
   b. an increase in government spending results in a smaller increase in output than in a one-country model.
   c. an increase in government spending results in a larger decrease in the trade balance than in a one-country model.
   d. an increase in government spending results in a smaller decrease in the trade balance than in a one-country model.
   e. (a) and (d)

3. 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
   a. the IS curve is flat.
   b. the IS curve is vertical.
   c. the LM curve is flat.
   d. the LM curve is vertical.
   e. (b) and (c).

4. 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.

5. 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.
6. 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.

7. A country observes that it has a trade surplus and over-employment. A correct combination of policies
to obtain external and internal balance might be
a. devalue and cut government spending.
b. revalue the exchange rate and cut government spending.
c. devalue the exchange rate and provide incentives for decreased investment.
d. devalue.
e. both (b) and (d) above.

8. A country is running a current account deficit. Which of the following is true if the private financial
account 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.

9. 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).
a. $400 billion.
b. $200 billion.
c. $100 billion.
d. $60 billion.
e. $40 billion.

10. A revaluation usually
a. lowers the price paid by foreigners for domestic exports and raises the price of imports.
b. raises the price paid by foreigners for domestic exports and raises the price of imports.
c. raises the price paid by foreigners for domestic exports and lowers the price of imports.
d. lowers the price paid by foreigners for domestic exports and lowers the price of imports.
e. does not change the price paid by foreigners for domestic exports and lowers the price of imports.


**Part II: Short Answer (30 minutes)**

Suppose the real side of the economy is given by:

1. \( Y = AD \) \hspace{1cm} \text{Output equals aggregate demand – an equilibrium condition}
2. \( AD = C + I + G + EX - IM \) \hspace{1cm} \text{Definition of aggregate demand}
3. \( C = CO + c(Y - T) \) \hspace{1cm} \text{Consumption function, } c \text{ is the marginal propensity to consume}
4. \( T = TA + tY \) \hspace{1cm} \text{Tax function; } TA \text{ is lump sum taxes, } t \text{ is tax rate.}
5. \( I = IN - bi \) \hspace{1cm} \text{Investment function}
6. \( G = GO \) \hspace{1cm} \text{Government spending on goods and services}
7. \( EX = EXP + vq \) \hspace{1cm} \text{Export spending}
8. \( IM = IMP + mY - nq \) \hspace{1cm} \text{Import spending}

And the monetary side given by:

9. \( i = \left(\frac{1}{h}\right)\left(\frac{M}{P}\right) + \left(\frac{k}{h}\right)Y \) \hspace{1cm} \text{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 a change in the real exchange rate, holding all else constant.

Now assume the exchange rate is fixed, and the BP=0 schedule is given by:

10. \( i = \left(\frac{1}{\kappa}\right)[(EXP - IMP + KA) + (n + v)q] + \bar{i}^* + \left(\frac{m}{\kappa}\right)Y \)

4. (4 minutes) Draw a diagram in i-Y space showing equilibrium. Write clearly what the position of the IS, LM and BP=0 curves depend upon. Assume \( m/\kappa < k/h \).

5. (5 minutes) Show what happens to output and the interest rate if the lump sum taxes are deceased, using a graph (show the curve shifts clearly). Assume for the moment the central bank sterilizes flows.

6. (6 minutes) Show what happens over time the curves, and the money base, if the central bank does not sterilize flows. Explain clearly the mechanics and economics of what happens.