ECON 311 - Intermediate Macroeconomics (Professor Gordon)
Second Midterm Examination: Fall 2014
Answer sheet

YOUR NAME:___________________________________

Student ID: ___________________________________

Circle the **TA session** you attend: Chris - 3PM Andreas - 3PM Hugh - 3PM

Chris - 4PM Andreas - 4PM Hugh - 4PM

INSTRUCTIONS:

1. The exam lasts **1 hour**.
2. The exam is worth 60 points in total: 30 points for the multiple choice questions (Part A) and 30 points for the three analytical problems (Part B).
3. **Write your answers for part A (the multiple choice section) in the blanks below.** You won't get credit for circled answers in the multiple choice section.
4. **Place all of your answers for part B in the space provided**.
5. You must show your work for part B questions. There is no need to explain your answers for the multiple choice questions.
6. When answering the multiple choice questions, choose the answer that fits the question best.
7. **You must turn in both the answers and the multiple-choice questions. DO NOT PULL THEM APART.**

Good luck!

PART A: Multiple Choice Problems
Answer multiple choice questions in the space provided below.
USE CAPITAL LETTERS.

1	**B**	6	**B**	11	**A**	16	**B**	21	**A**	26	**C**
2	**B**	7	**D**	12	**C**	17	**C**	22	**D**	27	**D**
3	**C**	8	**C**	13	**B**	18	**B**	23	**C**	28	**C**
4	**B**	9	**A**	14	**B**	19	**B**	24	**D**	29	**A**
5	**B**	10	**C**	15	**D**	20	**C**	25	**C**	30	**B**

PART B: Analytic Problems

QUESTION 1: Government Deficits (5 points)

Suppose that
YN(Natural real GDP)=12,000
Y(Actual real GDP)=11,600
$T_a=0$
t=0.18
G=2200

(A) Compute the actual deficit and the natural employment deficit *(2 points)*

Actual deficit = 11600*0.18 - 2200 = -112
Natural employment deficit = 12000*0.18 - 2200 = -40

(B) Suppose that fiscal policy is used to increase actual real GDP to natural real GDP. This requires two actions: (i) the average tax rate (t) be cut by 0.02 to 0.16.; (ii) G be increased by 200 to 2400. Compute the new natural employment deficit. *(2 points)*

Natural employment deficit = 12000*0.18-2400 = -240

(C) Suppose that **instead of fiscal policy**, monetary policy is used to increase actual real GDP to natural real GDP. What would the new actual employment deficit be? *(1 point)*

Actual deficit = Natural employment deficit = 12000*0.18 - 2200 = -40

QUESTION 2: AS-AD (10 points)

Consider a **CLOSED ECONOMY** for which natural real GDP is $Y^N = 60$ and suppose that right now aggregate demand (AD) and short-run aggregate supply (SAS) are described by the equations:

AD: $Y = 8A_p' - 10P$

SAS: $Y = 50 - 4W + 10P$

A) Assume that initially $A_p' = 10$ and $W = 2.5$. What are the short-run and long-run values of real GDP and price level? (3 points)

AD: Y = 80 - 10P
SAS: Y = 50 - 4*2.5 + 10P = 40 + 10P
LAS: Y = Y^N = 60

In the long-run solve AD and LAS together, get Y = 60 and P = 2
In the short-run solve AD and SAS together, get Y = 60 and P = 2

B) Still assume that $A_p' = 10$. What is the real wage rate in the long run? (1 point)

The real wage in the long run is W/P = 2.5/2 = 1.25

C) Suppose that the government increases spending by 2.5 compared to above.

C1) Find the **short run** levels of Y, P (2 points)

The new AD curve is Y = 8(10+2.5) - 10P = 100 - 10P
Solving this together with the SAS curve gives Y =70 and P = 3

C2) In the long-run, will the **nominal wage** go up or down? Briefly explain your answer (2 points)

Up. Firms supply more than YN as nominal wages didn't go up yet and hence real wages are low.

C3) Instead of a change in the wage, a change in the **cost of inputs for production** (raw prices) could move GDP back to the long-run level. Would the cost of inputs have to go up or down? Briefly explain your answer (2 points)

Up. If input costs go up, then firms will supply less even though the real wage is lower than it was in the long-run equilibrium before.

QUESTION 3: Open IS-LM (15 points)

Let the following represent the structure of a **SMALL OPEN ECONOMY** with **PERFECT CAPITAL MOBILITY** and **FLEXIBLE EXCHANGE RATES**:

$C = C_a + 0.7(Y\text{-}T)$,
$C_a = 70$, $T= 50$, $G=55$,
$I_P = 60 - 4r$,
$NX = 70 - 0.2Y - 10e$,
$(M/P)^D = 0.25Y\text{-}3r$,
$M^S/P = 50$.

A) Assume that initially foreign and domestic interest rates are equal so that $r = r^f$ and let the foreign exchange rate e=2. Find the IS and LM equations. (3 points)

k=1/(1-0.7+0.2)=2
Ap=70 - 0.7*50 + 55 + 60 - 4r + 70 - 10e = 220 - 4r - 10e = 200– 4r
IS: Y = 2*(220-4r-10e)=440-8r-20e=400-8r
LM: 50 = 0.25Y - 3r -> Y = 200 + 12r

(B) Find the equilibrium income, interest rate and net exports. (3 points)

200+12r = 400 - 8r -> 20r=200 -> r = 10 -> Y = 320
NX = 70 - 64 - 20 = -14

(C) Suppose autonomous planned investment goes up from 60 to 100..

(C1) Write down the new IS curve, after the shift in autonomous investment. Keep in mind that this is a small open economy with **perfect capital mobility** and **flexible exchange rates**.
Hint: Express Y in terms of r and e (2 points)

New Ap=70 - 0.7*50 + 55 + 100 - 4r + 70 - 10e = 260 - 4r - 10e
New IS: Y=520-8r-20e

(C2) Combine the new IS curve with the LM curve to determine the new <u>equilibrium</u> value of output. What is the change in net exports? *Hint: this is a flexible exchange rate economy, so the exchange rate must adjust so that the interest rate is the world interest rate* (3 points)

By the LM equation and interest rate parity, r=10, Y=320
LM: 50 = 0.25Y - 3r, Y=200+12r
Since r=10, Y=320

Y =520-8r-20e
-> 320=520 – 8*10 - 20e
-> e = 120/20 = 6
NX = 70 - 0.2*320 - 10*6 = -54

Or start with: Ap has to go down by 40
> NXa has to go down by 40
-> 10*delta_e=40
-> e = 6

(D) The change in investment of part (C) resulted in a change in the exchange rate. Suppose that for some reason the central bank doesn't like this change and decides to change money supply in order to bring back the exchange rate to its original level. What is the new money supply? What is the new GDP? *Hint: start with finding GDP given the new IS curve from part (C)* (4 Points)

e=2, r=10. The IS equation is Y =520-8r-20e, so Y=400.
Ms/P=.25Y-3r=70

PART A: Multiple Choice Problems

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Ceteris paribus, if bond prices rise, then

A) the Federal reserve must be pursuing contractionary monetary policy.
B) bond yields will fall
C) bond yields will increase as well.
D) there is no effect on bond yields.

2) Negative output gap indicates that

A) the actual real GDP is above natural real GDP.
B) the actual real GDP is below natural real GDP.
C) nominal GDP is below real GDP.
D) nominal GDP is above real GDP.

3) According to Gordon, the three main ingredients in the recent U.S. housing bubble are

A) high interest rates, lack of savings, and financial innovation.
B) capital outflow, budget deficit, and trade deficit.
C) low interest rates, saving glut, and financial innovation.
D) financial innovation, expansionary fiscal policy, and capital outflow.

4) Referring to a bank's t-account, the difference between total assets and total liabilities is called

A) leverage.
B) equity.
C) deposits.
D) reserves.

5) As shown by the IS-LM model, there are two reasons that the Fed can lose control of the economy. One of these reasons is

A) federal funds rate can never reach zero percent.
B) that the zero federal funds rate achieved by the Fed is irrelevant to household and business borrowers.
C) household and business borrowers do not base their decision to borrow on interest rates.
D) zero federal funds rate is not sustainable.

6) ________ occurs when a central bank purchases assets with the intention not of lowering the short-term interest rate, which is already at zero, but with the purpose of increasing bank reserves.

A) Loan originating
B) Quantitative easing
C) Fiscal incrementing
D) Fiscal easing

7) In the recent Global Economic Crisis, all of the following are causes that pushed the IS curve to the left EXCEPT

A) growing unwillingness of banks and nonbank financial institutions to grant loan.
B) the end of cash-out mortgage refinancing.
C) the negative wealth effect from the collapse of the housing bubble.
D) slow and minimal response of the U.S. government.

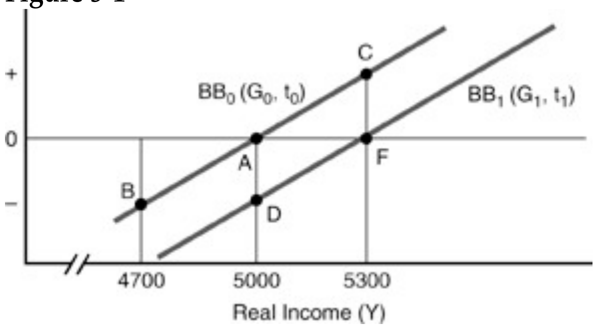
8) In a small open economy with perfect capital mobility, the real interest rate will always be

A) below the world real interest rate.
B) above the world real interest rate.
C) equal to the world real interest rate.
D) independent of the world real interest rate.

9) Suppose we have an economy for which G = 1100, T = 800, S = 230, and I = 230. If I falls to 150, the economy's balance of trade changes

A) from a deficit of 300 to a deficit of 220.
B) from a deficit of 70 to a surplus of 10.
C) from 0 to a surplus of 80.
D) from 0 to a deficit of 80.
E) from 0 to a deficit of 70.

Figure 5-1



10) In Figure 5-1 above, if the budget line is BB_0 and the natural real GDP is $5300, the structural surplus or deficit is

A) FA.
B) AD.
C) FC.
D) none of the above.

11) Persistent government budget deficit result in ________ taxes and a ________ stock of capital in the future.

A) higher, smaller
B) lower, larger
C) higher, larger
D) lower, smaller

12) Government debt places a burden on future generations if

A) the debt is used to fund schools and highways.
B) the debt is used to fund the production of investment goods.
C) the debt is used to fund the current consumption of its citizens.
D) All of the above are correct.

13) In a recession, automatic stabilization ________ tax revenues and ________ the debt-GDP ratio.

A) raises, raises
B) lowers, raises
C) lowers, lowers
D) raises, lowers

14) The clearest indicator of a switch to a less expansionary fiscal policy is a

A) fall in the natural employment surplus.
B) rise in the natural employment surplus.
C) fall in the actual surplus.
D) rise in the actual surplus.

15) A nation's net international investment position is

A) the difference between its exports of goods and services and its import of goods and services.
B) unaffected by policy driven interest rate changes.
C) identical to its current account balance.
D) the difference between all foreign assets owned by a nation's citizens and domestic assets owned by foreign citizens.

16) Consider a foreign exchange market diagram with dollars on the horizontal axis, the yen price of the dollar on the vertical axis, an upward-sloping supply curve and downward-sloping demand curve. At an exchange rate below the equilibrium rate there is an excess ________ dollars causing market pressure for ________ of the dollar.

A) supply of, depreciation
B) demand for, appreciation
C) supply of, appreciation
D) demand for, depreciation

17) Suppose that U.S. and British inflation rates are equal, and $2 exchanges for 1 British pound. Then if U.S. inflation slows down relative to British inflation, the PPP theory predicts ________ of the dollar, so that the pound will cost ________ than $2.

A) a depreciation, more
B) an appreciation, more
C) an appreciation, less
D) a depreciation, less

18) A stronger dollar implies that foreigners will find U.S. exports ________ and U.S. citizens will find imports ________.

A) more expensive; more expensive
B) more expensive; less expensive
C) less expensive; more expensive
D) less expensive; less expensive

19) Switching the U.S. policy mix to a tighter fiscal and easier monetary policy ________ the U.S. interest rate, leading to ________ of the dollar, which puts ________ long-run pressure on the U.S. foreign trade surplus.

A) raises, depreciation, upward
B) lowers, depreciation, upward
C) lowers, appreciation, downward
D) raises, depreciation, downward
E) raises, appreciation, upward

20) If inflation is greater in Mexico by 10% than it is in the rest of the world then the purchasing power parity theory predicts that the

A) Mexican peso would remain stable.
B) Mexican peso would appreciate.
C) Mexican peso would depreciate.
D) U.S. dollar would weaken.

21) A nation's foreign trade deficit implies a buildup of what ________ in allowing its imports to ________ its exports.

A) it owes to foreigners, exceed
B) foreigners owe to it, exceed
C) foreigners owe to it, fall short of
D) it owes to foreigners, fall short of

22) A fall in the price level causes changes in the IS-LM diagram that can also be recorded as a
A) movement upward along an AD curve.
B) leftward shift of the AD curve.
C) rightward shift of the AD curve.
D) movement downward along an AD curve.

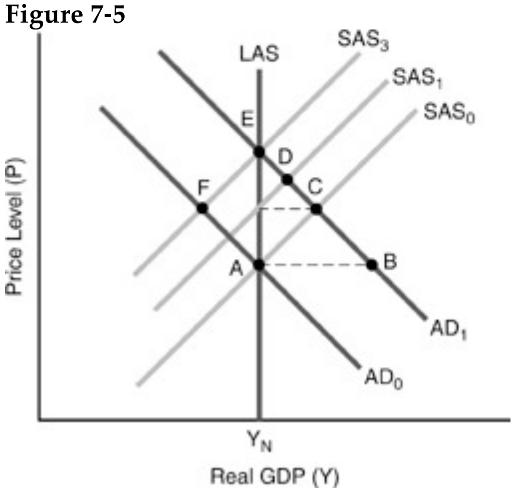
23) Following the use of expansionary fiscal policy in the United States, which of the following events will NOT take place?
A) increase in exports of foreign countries to the United States
B) appreciation of the dollar
C) increase in U.S. net exports
D) increase in U.S. interest rate

24) An increase in the nominal money supply will shift
A) SAS up and raise the price level.
B) AD down and lower the price level.
C) SAS down and lower the price level.
D) AD up and raise the price level.

25) With a fixed nominal wage the SAS curve is positively sloped because
A) business firms are responsive to interest rates.
B) the marginal leakage rate is small.
C) an increase in P decreases the real wage and raises profits if output is increased.
D) A decrease in P decreases the real wage and raises profits if output is increased.

26) If labor unions negotiate an increase in the nominal wage rate the SAS curve will shift
A) downward to the left and output will decrease.
B) upward to the right and output will increase.
C) upward to the left and output will decrease.
D) downward to the right and output will increase.

Figure 7-5



27) In Figure 7-5, a fiscal expansion from point A with no initial change in the nominal wage causes a movement to point
A) D.
B) B.
C) E.
D) C.
E) F.

28) In a self-correcting economy, an increase in government expenditures in the long-run will
A) lower the price level but leave real GDP unaffected.
B) leave the price level and real GDP unaffected.
C) raise nominal GDP but leave real GDP unaffected.
D) raise equilibrium real GDP and raise the price level.

29) A rise in the price level causes
A) the LM curve to shift upward.
B) movement up along an LM curve.
C) the LM curve to shift downward.
D) movement down along an LM curve.

30) That the LAS curve is vertical means that
A) actual real GDP does not depend on the value of natural real GDP.
B) natural real GDP does not depend on the price level.
C) firms are willing to produce any amount of output demanded at the fixed price level.
D) output never deviates from the natural real GDP.