ECON 311 - Intermediate Macroeconomics (Professor Gordon)
Second Midterm Examination: Fall 2013
Answer sheet

YOUR NAME: ______________________________

Student ID: ______________________________

Circle the **TA session** you attend: Chris - 10AM Chris - 1PM

Andreas - 10AM Andreas - 1PM

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

PART B: Analytic Problems

QUESTION 1: AS-AD (15 points)

Consider a **CLOSED ECONOMY** for which natural real GDP is $Y^N = 50$ and suppose that right now aggregate demand (AD) and short-run aggregate supply (SAS) are described by the equations:

AD: $Y = 6A_p' - 10P$

SAS: $Y = 50 - 2W + 10P$

A) Assume that initially $A_p' = 10$ and $W = 5$. Write down the AD, the SAS and the LAS curves. (3 point)

AD: $Y = 60 - 10P$
SAS: $Y = 50 - 10 + 10P = 40 + 10P$
LAS: $Y = Y^N = 50$

B) What are the short-run and long-run values of real GDP and price level? What is the equilibrium real wage rate in the long run? (5 points)

In the long-run solve AD and LAS together, get $Y = 50$ and $P = 1$
In the short-run solve AD and SAS together, get $Y = 50$ and $P = 1$
The real wage in the long run is therefore $W/P = 5$

C) Suppose that the government increases spending by 4 compared to above. Find the new values of real GDP and price level in the short-run. (2 points)

The new AD curve is $Y = 6(10+4) - 10P = 84 - 10P$
Solving this together with the SAS curve gives $Y =62$ and $P = 2.2$

D) What are the new values of real GDP and price level in the long-run? (2 points)

In the long-run GDP always goes back to its natural level, so Y^N. Using the new AD curve, we find P = 3.4

E) What would be the value of the nominal wage rate in a long-run equilibrium? (3 points)

The nominal wage rate must adjust such that the SAS curve also intersects the AD curve at the long-run equilibrium:
50 = 50 - 2W + 10P = 50 -2W +34 -> W = 17

Equally we could find it by knowing that the real wage wouldn't change compared to (A), hence W/P = 5 -> W/3.4 = 5 -> W = 17

QUESTION 2: Open IS-LM (15 points)

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

$C = C_a + 0.6(Y-T)$,
$C_a = 40$, $T = 30$, $G=42$,
$I_P = 35 - 5r$,
$NX = 50 - 0.1Y - 12e$,
$(M/P)^D = 0.2Y-2r$,
$M^S/P = 30$.

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

k=1/(0.4+0.1)=2
Ap=40 - 0.6*30 + 42 + 35 - 5r + 50 - 12e = 149 - 5r - 12e = 125 - 5r
IS: Y = 298 - 10r - 24e = 250 - 10r
LM: 30 = 0.2Y - 2r -> Y = 150 + 10r

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

150 + 10r = 250 - 10r -> r = 5 -> Y = 200
NX = 50 - 20 - 24 = 6

(C) The central bank thinks that Y is too high and reduces real money supply from 30 to 28 in order to reduce GDP.

(C1) Write down the new LM curve corresponding to the new money supply. Keeping in mind that this is a small open economy with perfect capital mobility, solve the new LM curve for the equilibrium values of Y and r. (2 points)

New LM: 28 = 0.2Y - 2r -> Y = 140 + 10r
In equilibrium r goes back to previous level, so r = 5 and Y = 190

(C2) How does the IS curve adjust so that it crosses the new LM curve at the new equilibrium value of output? *Hint: this is a flexible exchange rate economy, so the exchange rate must adjust by enough to change NX by enough to shift the IS by the required amount.* (3 points)

Y = 298 - 10r - 24e
-> 190 = 298 - 50 - 24e
-> e = 29/12 = 2.416
NX = 50 - 0.1*190 - 12*2.416 = 2

Or start with: Ap has to go down by 5
> NXa has to go down by 5
-> 12*delta_e=5
-> e = 2+(5/12) = 29/12 = 2.416

(D) After the central bank's intervention of (C), the government thinks that (as a result of this intervention) NX is too low. In order to increase NX, the government reduces spending by 5 to 37.

(D1) Does this additional change in fiscal policy change the equilibrium values of r and Y you found in (C1)? Explain. *Hint: In the long run we can pin down the value of Y using the LM curve. This means that any shift in the IS curve caused by the reduction in G must be offset by an equal increase in NX. This requires a change in the exchange rate in this flexible exchange-rate economy.* (1 Point)

No. With flexible exchange rates the exchange rate will go down to undo the effects of the reduction in G.

(D2) Derive the new equilibrium values of e and NX (i.e. if G= 37 and $M^S/P = 28$). (3 Points)

Y = 288 - 10r - 24e
-> 190 = 288 - 50 - 24e
-> e = 2
NX = 50 - 0.1*190 - 12*2 = 7
note that we can double check the math by plugging in e: Y= 288 - 10r - 24e = 250 - 10r.

Or start with : Change in Ap induced by G has to be offset by NX
If G reduced by 5, then NX_a must increased by 5 and hence NX must increase by 5 to 7 (it was 2 in C2).
Necessary change in e so that NXa increased by 5: e needs to go down by 5/12=0.416 and we're back at the original e=2.

PART A: Multiple Choice Problems

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

1) Subprime mortgages refer to the mortgages issued

A) by government
B) by low rating financial institutions.
C) to borrowers with low incomes and poor credit histories.
D) at an interest rate below prime rate.

2) Referring to a bank's t-account, equity refers to

A) the ratio of the total assets and total liabilities.
B) the difference between total assets and total liabilities.
C) none of the above.
D) the sum of total assets and total liabilities.

3) The process of combining many different debt instruments like home mortgages into a pool of hundreds of thousands of individual contracts and then selling new financial instruments is called

A) Leveraging.
B) NINJA loaning.
C) Sub-priming.
D) Securitization.

4) Leverage refers to

A) the ratio of total assets of a financial institution to total liabilities.
B) the ratio of the liabilities of a financial institution to equity capital..
C) the ratio of the debt of a financial institution to liabilities.
D) the ratio of equity capital of a financial institution to the liabilities.

5) In the IS-LM model, assuming downward sloping IS curve and upward sloping LM curve, reduction in consumers' wealth is going to

A) cause a leftward shift of the IS curve.
B) cause a rightward shift of the LM curve.
C) cause a movement along the IS curve.
D) cause a leftward shift in the LM curve.

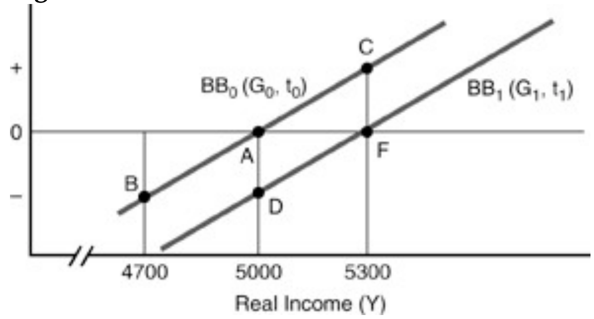
6) The lecture noted the failure of the depreciation of the dollar in 2002 to 2007 to stimulate manufacturing employment. This was attributed to

A) opening of new Chinese factories producing exports
B) revaluation of American assets abroad due to the depreciating dollar
C) China's central bank bought dollars
D) revaluation of Chinese assets in the U. S. due to the depreciating dollar
E) A) and B)
F) A) and C)

7) The lecture contrasted the New Deal's WPA and CCC policies with Obama stimulus spending to rebuild Sheridan Road in 2010. Which point(s) were emphasized?

A) New Deal labor intensive, Obama stimulus capital-intensive
B) New Deal capital intensive, Obama stimulus labor intensive
C) New Deal hired workers directly, Obama stimulus money went to states and localities
D) New Deal stimulus money went to states and localities, Obama stimulus hired workers directly
E) A) and C)
F) B) and C)

Figure 5-1



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

9) Which of the following effects takes place as a result of automatic stabilization?

A) leakages increase during a recession, helping to stimulate the economy
B) tax revenues remain constant during a recession
C) extra tax revenues are generated in a boom
D) Both A and C are correct.

10) The U. S. Economy's "You First" problem is diagnosed as

A) coordination failure
B) insufficient government spending
C) excessively high taxes
D) political deadlock
E) A) and D)
F) B) and D)

11) If the U.S. government sells bonds to fund improvements in infrastructure, and the bonds are bought by foreigners, the burden on future U.S. taxpayers

A) is not increased so long as the return on the improvements is above zero.
B) is not increased so long as the return on the improvements is below the borrowing cost.
C) is increased regardless of the borrowing cost and the return on the improvements.
D) is not increased so long as the return on the improvements is at or above the borrowing cost.

12) An annually balanced federal budget ________ macro- stabilization policy by requiring ________ fiscal policy during recessions.

A) assists, tighter
B) inhibits, easier
C) inhibits, tighter
D) assists, easier

13) Which of the following is NOT an example of fixed exchange rates creating unemployment

A) U.S. in the 1970s
B) U.K. in the 1920s
C) Greece in the last three years
D) Ireland in the last three years

14) A U.S. balance of payments deficit puts ________ pressure on the foreign price of the dollar, which, under a flexible exchange rate system, tends to ________ that deficit.

A) downward, worsen
B) upward, eliminate
C) downward, eliminate
D) upward, worsen

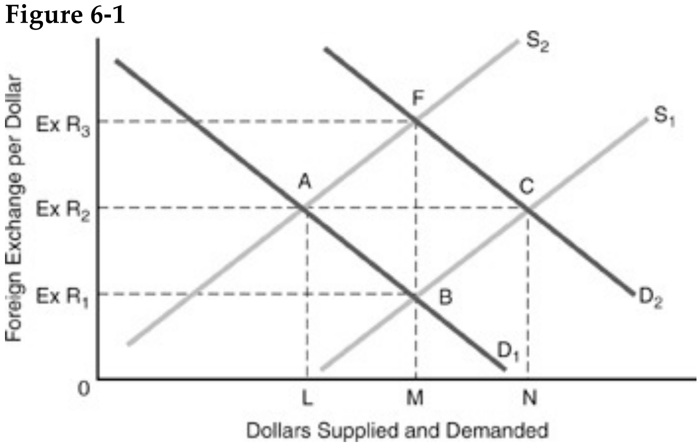
15) Suppose that "fundamentals" have determined an exchange rate of 130 yen to the dollar. If the Federal Reserve wishes to maintain an exchange rate of 140 yen to the dollar, it must meet the private excess ________ dollars in the dollar-yen market by ________.

A) demand for, buying yen with dollars
B) supply of, buying yen with dollars
C) demand for, selling yen for dollars
D) supply of, selling yen for dollars

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

Figure 6-1



17) In Figure 6-1 above, an increase in autonomous exports will cause the ________ dollars to ________ and the exchange rate to ________, ceteris paribus.

A) demand for; shift to D2; appreciate
B) demand for; shift to D1; depreciate
C) supply of; shift to S1; depreciate
D) supply of; shift to S1; appreciate

18) The mechanism of "international crowding-out" is that a government budget deficit ________ the domestic interest rate, which makes the dollar ________ expensive for foreigners, which then ________ net exports.

A) lowers, more, raises
B) raises, less, raises
C) lowers, less, lowers
D) raises, less, lowers
E) raises, more, lowers

19) The aggregate demand curve may be derived from the IS-LM analysis by shifting

A) the LM rightward when P increases to define Y.
B) the IS curve as the price changes.
C) the real money supply and thus LM curve for each new price level.
D) both the LM and IS curves since the real money supply and real expenditures change when P changes.

20) At every point to the right of the AD curve there is

A) an excess demand for commodities.
B) an excess demand for real balances.
C) an excess supply of real balances.
D) an excess supply of commodities.

21) Which of the following elements in the Texas state constitution would, if it had been adopted for the entire United States, would have avoided the housing price bubble of 2001-2006?

A) prohibition of securitization
B) prohibition of shadow banks
C) prohibition of down payments below 20 percent
D) prohibition of mortgage-backed securities

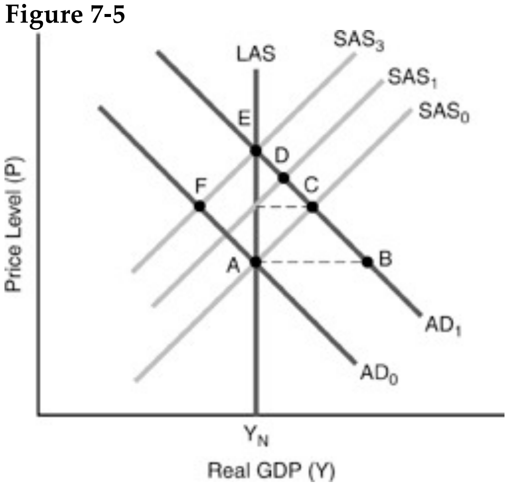
22) If labor unions negotiate an increase in the nominal wage rate the SAS curve will shift

A) downward to the right and output will increase.
B) upward to the left and output will decrease.
C) downward to the left and output will decrease.
D) upward to the right and output will increase.

23) Which of the following will NOT shift the aggregate demand curve?

A) a change in the price level
B) a reduction in the marginal propensity to save
C) an increase in the money supply
D) an increase in government spending

Figure 7-5



24) In Figure 7-5 above, from point A sudden increases in the price of crude oil would move us to point

A) C.
B) F.
C) E.
D) D.
E) B.

25) 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.

26) If the intersection of the IS curve with the horizontal axis comes at a level of output below the natural level of output, the Fed 1) _________

A) loses control of the economy.
B) must use contractionary model policy to correct economic problem.
C) must decrease money supply and ignore interest rates.
D) can easily bring the economy back to the full-employment level of output.

27) The foreign exchange rate refers to

A) the rate of change in a nation's exports and imports.
B) the rate of change in a nation's international investment position.
C) the amount of one nation's money that can be obtained in exchange for a unit of another nation's currency.
D) the rate at which foreign exports are flowing into a nation's output market.

28) The cyclical deficit is

A) the same as the structural deficit.
B) the amount by which structural deficit exceeds the actual budget deficit.
C) the amount by which the actual government budget deficit exceeds the structural deficit.
D) what the budget deficit would be if the economy were operating at the natural real GDP level.

29) Consider an initial IS-LM equilibrium point which corresponds to a point labeled "A" on the current AD curve. If government spending increases with no change in the price level, the resulting IS-LM equilibrium corresponds to a point in the AD diagram

A) directly to the right of A on a new AD curve.
B) directly to the left of A on a new AD curve.
C) straight above A on a new AD curve.
D) which has moved downward along the same AD curve.
E) straight below A on a new AD curve.

30) The lecture introduced the term “beggar my neighbor” in the context of economic issues for which decade?

A) 1930s
B) 1950s
C) 1970s
D) 1990s