Three Exams from Fall 1999 --

FIRST MIDTERM EXAM

☛ Answer any three **(3)** of the first four questions ((A.), (B.), (C.), (D.)) in the spaces provided. Do **NOT** answer all four. If you need extra space, you may continue answers on the back sides of these sheets. If you do, however, be sure to indicate which Question you are answering in each case. Explain all written answers.

Answer the multiple-choice questions on your free Scantron (882 form).

When you are done, put your Scantron form (with your name, ID number, and TA name) inside this test book.

☛ Remember: put your name, etc. BOTH on the Scantron AND at the top of this page.

- A___
- B___
- C___
- D___
- mc's___
- point __ + 1
- = raw___
- DLG___

First Midterm's WRITTEN-ANSWER QUESTIONS

Answer any three **(3)** of the first four questions ((A.), (B.), (C.), (D.)) in the spaces provided. Do **NOT** answer all four !

Question (A.) (19%) For any three (3) of the following groups, could having stable prices (no price inflation) be worse than having inflation? Or would they prefer inflation? Briefly explain your reasoning in each of your three parts to this answer.

(A.1) Debtors.

(A.2) The elderly.

(A.3) The poor (who earn low wages and are sometimes unemployed).

(A.4) Businesses (who pursue profits and pay their employees).

Question (B.) (19%) You are given that the marginal propensity to consume (or b) is 2/3. Consumption is the only kind of spending that depends on income -- taxes, transfers, and imports do not depend on income. Fearing a recession next year, business suddenly cut back on their investments in real capital formation (I) by $100 billion.

(B.1) (10%) By how much would this drop in I by $100 billion eventually change our real GDP (alias Y), after the economy has reached a new equilibrium? Show your work.

(B.2) (9%) Suppose that the Republicans insist that the resulting recession must be cured by cutting taxes, with no change in G. How much change in tax revenues would be necessary to just offset the $100 billion drop in I? Explain.

Question (C.) (19%) Consider the competitive market for gasoline in California. The interaction of demand and supply makes Californians buy and sell an equilibrium amount of gasoline (say 50 billion gallons a year) at an equilibrium price (say $1.60 a gallon).

Describe how <u>any three (3) of these five principles</u> of economics are involved in the demand and supply of California gasoline:

(C.1) The principle of opportunity cost.
(C.2) The marginal principle.
(C.3) The principle of diminishing returns.
(C.4) The spillover principle.
(C.5) The reality principle.

Question (D.) (19%) The student housing market in Davis is tight, with an equilibrium price for a 2-bedroom apartment around $800 a month [Reminder, 2002 folks: That was in 1999!] . Suppose that the City Council decides that rents are too high, and passes a law saying that no landlord can charge more than $600 a month for any 2-bedroom apartment (with similar rent ceilings for 1-bedroom apartments).

(D.1) (9%) What would happen to the number of 2-bedroom apartments available in Davis? Explain why.

(D.2) (10%) Would people who want to live in 2-bedroom apartments be made better off or worse off by this law? Explain.

First midterm's MULTIPLE-CHOICE QUESTIONS

(14 questions for 3% each = 42%)

(fill in answers on Scantron Form 882)

(1.) Suppose that you are debating whether to open up your own scuba diving shop. Which one of the following is an example of an implicit cost, or an opportunity cost, of operating such a shop?

(a) The cost of air tanks.

(b) The cost of buying software for keeping your account books.

(c) The cost of your own time managing the shop.

(d) The cost of paying sales clerks.

(e) The cost of paying dive masters.

(2.) You are an investigator for the state of California, assigned to determine what is happening to the marijuana market and why. Your team of detectives finds out that the price of marijuana has dropped and the quantity of it has risen. Which of the following changes could you most safely say has happened?

(a) Marijuana has become more popular, raising the demand for it.

(b) Marijuana has become less popular, restricting the demand for it.

(c) Marijuana supply has become more restricted.

(d) Marijuana growers have become able to supply it more easily.

(e) Marijuana has become more popular, but its supply has been more restricted.

(3.) Which of the following would give a correct measure of GDP? (C = consumption expenditures, I = gross real investment, G = government purchases of goods and services, X = exports, and IM = imports.)

(a) GDP = C + I + G + X + IM.

(b) GDP = C + I + G + X - IM.

(c) GDP = C + I + G.

(d) GDP = C + I + G - X - IM.

(e) GDP = C + I - G - X + IM.

(4.) Which of the following would restrict aggregate demand?

(a) An increase in transfer payments to the poor.
(b) An increase in tax rates.
(c) An increase in our exports.
(d) An increase in government purchases of goods and services.
(e) A decline in the capital stock.

(5.) Relative to the United States as a whole, California has

(a) a higher legal minimum wage rate and a higher unemployment rate.
(b) a higher legal minimum wage rate and a lower unemployment rate.
(c) no stipulated minimum wage rate.
(d) a lower legal minimum wage rate and a higher unemployment rate.
(e) a lower legal minimum wage rate and a lower unemployment rate.

(6.) Which of the following would make the multiplier larger, so that real GDP is more sensitive to shocks in aggregate demand?

(a) Automatic stabilizers.
(b) A higher marginal propensity to consume.
(c) A positive tax slope (t), so that tax revenues depend positively on income.
(d) A positive marginal propensity to import (m), so that imports rise with income.
(e) Full employment, with a classical supply curve.

(7.) If the number of employed is 36, the number of unemployed is 2, and the number of people over the age of 16 is 60, then the labor force participation rate is

(a) 36/60.
(b) 2/38.
(c) 36/38.
(d) 22/60.
(e) 38/60.

(8.) Consider the market for luxury automobiles. What would be the effect on price and quantity of a simultaneous increase in the incomes of consumers (assume luxury automobiles are a normal good) and a decrease in the price of steel, a key input in the production of cars?

(a) Quantity increases, price increases.
(b) Quantity increases, price decreases.
(c) Quantity increases, price effect uncertain.

(d) Quantity effect uncertain, price increases.
(e) Quantity effect uncertain, price decreases.

(9.) A toy store adds bicycles to its inventory in 1999 in anticipation of an increased demand for bicycles. But the store is not able to sell the bicycles in 1999. The bicycles added to inventory:
(a) will be counted in 1999 GDP, as part of investment.
(b) will not be counted in 1999 GDP, because they were not sold in 1999.
(c) will be counted in 1999 GDP as a durable consumption expenditure.
(d) will not be counted in 1999 GDP because they are intermediate goods.
(e) will be counted in 1999 GDP as consumption, even though they were not sold in 1999.

(10.) If the government pays for environmental cleanup services, this cost
(a) will be added in calculating GDP, as part of the government's purchases of goods and services.
(b) will be ignored in calculating GDP.
(c) will be subtracted in calculating GDP.
(d) will decrease our social welfare.
(e) is an unintended inventory accumulation.

(11.) Last year, the price index was 100, and nominal GDP was 500. This year the price index is 120 and nominal GDP is 515. From last year to this year
(a) prices and real GDP both dropped.
(b) prices dropped and real GDP rose.
(c) real GDP stayed the same.
(d) prices rose and real GDP dropped.
(e) prices and real GDP both rose.

(12.) If the marginal tax rate is cut from 0.25 to 0.20, this will
(a) make the multiplier negative.
(b) lower the multiplier, but leave it positive.
(c) have no effect on the multiplier, since taxes do not contribute to GDP.
(d) have no effect on the multiplier, since there is no spending shift.
(e) raise the multiplier.

(13.) A time when the US government successfully used Keynesian policies and multiplier analysis to stimulate aggregate demand was

(a) during the Great Depression in the 1930s.
(b) during the Kennedy-Johnson era of the 1960s.
(c) during the oil shocks of 1973-1981.
(d) during the Reagan administration.
(e) during the Clinton administration.

(14.) If taxes were a lump sum that did not depend on income, and if the government were to raise both its purchases (G) and its fixed amount of taxes (Tx) by 100, this would

(a) cut GDP.
(b) leave GDP unchanged.
(c) raise GDP by less than 100.
(d) raise GDP by 100.
(e) raise GDP by more than 100.

BONUS QUESTION (an extra 3%) --

You can fill in your answer to it on your Scantron as Question (15)

(15.) If taxes do depend on income, with the marginal tax rate "t", and b is the usual marginal propensity to consume, then a lump-sum tax increase of $10 billion would change aggregate demand (desired spending) by $10 billion times

(a) - 1 / (1 - b).
(b) - b / (1 - b).
(c) - 1.
(d) - 1 / [1 - b(1-t)].
(e) - b / [1 - b(1-t)].

SECOND MIDTERM EXAM, Fall 1999

•• [Note for 2002: The second midterm for 2002 will include questions on foreign exchange rates, which in 1999 were covered only on the final exam, as noted below.]

WRITTEN-ANSWER QUESTIONS

You **MUST** answer Question **(A.)** for 28%:

(A.) Suppose that people decide that it is silly to hold so many dollars in currency, and they deposit $200 billion of their currency in US banks, in exchange for new checking deposits.

(A.1) (7%) By itself, how much would this set of transactions have changed the US money supply? Explain.

(A.2) (7%) If the required reserve ratio is 10 percent (1/10), and banks continue to lend out as much as this ratio allows, by how much would checking deposits in banks eventually have increased? Explain.

(A.3) (7%) By how much will the money supply have changed eventually? Explain.

(A.4) (7%) Now describe an open-market operation by the Federal Reserve that could keep this whole change of behavior from having any effect at all on the US money supply. Be specific. In which direction would they use open-market operations, and what amount of it would exactly offset the whole change in the money supply? (You can get partial credit on (A.4) even without specifying this amount.)

Answer **any two (2) out of** the next three questions, **(B.) & (C.) & (D.)**, for 15% each [Do not answer all three of them]:

(B.) (B.1) (8%) If the Federal Reserve cuts down on the money supply, what will happen to the government budget deficit? Explain.

(B.2) (7%) If the Federal Reserve cuts down on the money supply, and at the same time the government cuts tax rates, what will happen to interest rates? Explain.

(C.) ***•• [Note: Question (C.) refers to material that will come after the second midterm in 2002.]***

(C.1) (7%) What fiscal policy would "supply-side economics" recommend as the main way of simultaneously raising real GDP and cutting prices?

(C.2) (8%) Would this policy raise or lower the US government budget deficit? Explain.

(D.) For each of the following two policies, indicate whether it would be a net burden or a net benefit for future generations, and explain why:

(D.1) (8%) If the Fed cut the money supply, would this increase or decrease the burden of US government debt on future generations? (True, the Federal Reserve is not part of the government, but could it indirectly affect the burden of the public debt on future generations? If so, how?)

•• [Note: Question (D.2) refers to material that will come after the second midterm in 2002.]

(D.2) (7%) Would a "supply-side" fiscal policy, increase or decrease the burden of US government debt on future generations? How? Explain.

MULTIPLE-CHOICE QUESTIONS

(14 questions for 3% each = 42%; also a 3% bonus question)
(fill in answers on Scantron Form 882 or on UCD2000)

(1.) Which one of the following statements is true?

(a) Demand deposits in a bank are assets of that bank.

(b) Assets + liabilities = net worth.

(c) A bank's reserves can either be kept in a bank's vaults or be held on deposit with a Federal Reserve Bank.

(d) If a bank is holding $500 as required reserves and has $2,000 in deposits, then the required reserve ratio must be 40%.

(e) Liabilities generate income for a bank.

(2.) If the Federal Reserve cuts the money supply,
(a) investment spending and output (GDP) will fall.
(b) investment spending and output (GDP) will rise.
(c) investment spending will fall and output (GDP) will rise.
(d) investment spending will rise and output (GDP) will fall.
(e) investment spending does not respond to changes in the money supply.

(3.) Automatic stabilizers
(a) raise the full-employment budget deficit during a recession.
(b) provide a quantitative measure of expansionary fiscal policy.
(c) cause the budget deficit to rise when unemployment rises.
(d) are tax and spending changes that require approval by Congress.
(e) require the cooperation of the Federal Reserve.

(4.) Which of the following is an automatic stabilizer?
(a) Defense spending.
(b) Social Security payments to those over 65.
(c) Progressive income tax rates (rates that rise with income).
(d) Newly approved public works projects.
(e) Monetary policy.

(5.) The federal funds rate is the interest rate that:
(a) The U.S. government pays on treasury bonds.
(b) banks charge their most creditworthy customers.
(c) banks pay on demand deposits.
(d) banks charge when lending reserves to each other.
(e) the Federal Reserve charges when it lends reserves to banks.

(6.) Using the "golden rule" for analyzing government deficits, which of the following would be a fiscal policy that would not leave a net burden on future generations (numbers are %'s of GDP):

	Government deficit	Government investment	Effect of the deficit on private investment
(a)	12%	11%	- 5%

(b)	10%	11%	- 5%
(c)	7%	10%	- 4%
(d)	6%	10%	- 3%
(e)	5%	4%	- 2%

(7.) Suppose that a national government runs a true pay-as-you-go social security system with no surplus or deficit. The average income of working-age (young) adults is $25,000. There are 120 million working-age adults and 60 million retirement-age adults. For the average retired person to receive $20,000 a year would require a social security tax on working-age adults equal to

(a) 1/10, or 10% of their income.
(b) 1/6, or 16.7% of their income.
(c) 2/5, or 40% of their income.
(d) 1/2, or 50% of their income.
(e) 4/5, or 80% of their income.

(8.) Chile often experiences increases in the foreign demand for its exports (positive AD shocks) and decreases in that demand (negative AD shocks). Which of the following central bank policies would be WORST for stabilizing the Chilean economy in the face of such shocks?

(a) Stabilizing growth of real GDP.
(b) Stabilizing interest rates.
(c) Stabilizing the price level.
(d) Stabilizing the growth of the money stock.
(e) Stabilizing the level of unemployment.

(9.) The quantity of money that people wish to hold (the quantity of their money demand) is raised by either

(a) a rise in nominal GDP (PY) or a rise in the interest rate (r).
(b) a rise in nominal GDP (PY) or a fall in the interest rate (r).
(c) a fall in nominal GDP (PY) or a rise in the interest rate (r).
(d) a fall in nominal GDP (PY) or a fall in the interest rate (r).

[There is no choice (e) on this question.]

(10.) •• *[Question (10.) was on material that won't be covered in 2002.]*

(11.) Suppose a government decides to run a large budget deficit and to finance that deficit through the issuing of

bonds. The most likely effect on the bond prices and interest rates is

(a) an increase in bond prices and an increase in the interest rate.
(b) an increase in bond prices and a decrease in the interest rate.
(c) a decrease in bond prices and an increase in the interest rate.
(d) a decrease in bond prices and a decrease in the interest rate.
(e) a decrease in bond prices and no effect on the interest rate.

(12.) Which sequence of events best describes an expansionary monetary policy?
(a) The Fed makes an open market purchase, the money supply decreases, interest rates rise, investment spending decreases, and GDP decreases.
(b) The Fed makes an open market purchase, the money supply increases, interest rates fall, investment spending increases, and GDP increases.
(c) The Fed makes an open market sale, the money supply increases, interest rates fall, investment spending increases, and GDP increases.
(d) The Fed raises taxes, the money supply falls, interest rates rise, investment spending decreases, and GDP decreases.
(e) The Fed lowers taxes, the money supply increases, interest rates fall, investment spending increases, and GDP increases.

(13.) Which of the following is a monetary policy action that does <u>not</u> result in an expansion of the money supply?
(a) The Fed's directly buying US bonds and monetizing the deficit.
(b) A decrease in the reserve ratio.
(c) A decrease in the discount rate.
(d) The Fed's selling US bonds in the open market.
(e) The Fed's cutting taxes.

•• [Note: Question (14.) refers to material that will come after the second midterm in 2002.]

(14.) Suppose the government doubles the per-unit tax on a particular good (e.g. from a 15% tax to a 30% tax). We can say that the deadweight loss of the tax will
(a) more than double.

(b) exactly double.
(c) increase, but by less than a doubling.
(d) remain the same.
(e) actually go down.

•• [There was also a BONUS QUESTION for 3 % at the end of the second midterm, but it covered material that won't be covered in 2002.]

FINAL EXAM, Fall 1999

Written - answer questions

You **must answer all of Question (A.)** for 24% of the final exam:

(A.) The following changes are observed in the US economy from 2003 to 2004:

US real GDP	up 4%
US price index (GDP deflator)	up 1%
Federal government's budget surplus	up (i.e., less deficit)
US interest rate	up from r = 5% to r = 7%
US stock prices (S&P 500 index, say)	up from 1500 to 1600
Exchange rate (value of the $ in ¥/$)	up from 100¥ to 102¥

For each of the following six shifts ("six suspects"), explain whether it could, by itself, have caused the whole set of changes that occurred from 2003 to 2004. Defend each of your verdicts. For each suspect that you think could not have caused all these changes, just identify one change that it could not have caused. If you think it could have caused them all, quickly explain how it could have caused each of these changes.

The "six suspects":

(A.1) A rise in US government military spending (G up).

(A.2) Federal Reserve purchases of bonds in the open market.

(A.3) Tighter monetary policy by the Bank of Japan, cutting Japan's money supply.

(A.4) A boom in foreign demand for our exports (X up).

(A.5) A rise in foreign oil prices, enforced by oil-exporting countries.

(A.6) A rise in the US legal minimum wage rate from $7.00/hour to $9.00/hour.

Answer any **3 (three) out of (B.) through (F.)** for 14% each.
Do **not** answer all of (B.) through (F.).

(B.) (B.1) (8%) According to the "firm foundation" theory of stock prices, what are four fundamental determinants of stock prices?

(B.2) (6%) For any two (2) of these four fundamental determinants, describe whether it has moved in a way that would help explain the steep rise in stock prices in the U.S. in the 1990s.

(C.) (C.1) (4%) What should the Federal Reserve do if stock market prices rise to historically high values in relation to either GDP or current profits?

(C.2) (3%) Cite one such historical experience of unusually high stock market prices, and say what the Fed did in that case.

(C.3) (4%) What should the Federal Reserve do if stock market prices drop by 10 percent or more in less than a month?

(C.4) (3%) Cite one such historical experience of a sharp drop in stock market prices, and say what the Fed did in that case.

(D.) [Question (D.) related to material that we won't cover in 2002.]

(E.) [Question (E.) related to material that we won't cover in 2002.]

(F.) Suppose that monetary policy became tighter (more restrictive), while fiscal policy became easier (more expansionary) due to extra government spending. Suppose that the amounts of these changes just offset each other's effect on aggregate demand, leaving output and jobs the same for now.

(F.1) Would this combination of tighter monetary and easier fiscal policy raise or lower the foreign-exchange value of our currency? Explain.

(F.2) Would this combination raise or lower real domestic investment (I), such as home building? Explain.

Multiple - choice questions

Answer all 17 multiple-choice questions for 2% each (total weight = 34%), on your Scantron 882 form.

(1.) If we know that real GDP rose by 5 percent last year, while the price level doubled, what happened to nominal GDP?

(a) It increased by less than double.
(b) It increased by more than double.
(c) It exactly doubled.
(d) It did not change from last year.
(e) The change in nominal GDP cannot be determined from the information given.

(2.) Which of the following best explains the rise in wage inequality in the US since the late 1970s?

(a) The revival of union power.
(b) Technological innovations.
(c) Emigration from the US.
(d) The progressive nature of federal taxes.
(e) The recent increases in the minimum wage.

(3.) In the 1990s women got a better net rate of return than men did when investing in the stock market mainly because

(a) women chose better stocks.
(b) women tended to apply Keynes's "Castle in the Air" theory.
(c) women held their investments longer on average.

(d) women paid more attention to charting the past history of each stock.
(e) very few women invest, so that those that did were smarter on average.

(4.) Which best describes the United States system of exchange rates?
(a) The value of the US dollar is fixed by the US government.
(b) The value of the US dollar is fixed by the Federal Reserve.
(c) The value of the US dollar is fixed in ounces of gold.
(d) The value of the US dollar is fixed in terms of yen (Japan).
(e) The value of the US dollar fluctuates with shifts in supply and demand forces in the markets for foreign exchange.

(5.) Which of the following would not be included in the gross domestic product?
(a) Salaries of clerical staff working for the Federal government.
(b) Salaries of public school teachers.
(c) Payments of social security benefits to the elderly.
(d) Purchases of medical supplies for the military.
(e) Purchases of our products by persons living in other countries.

(6.) Which one of the following items is not classified as a current account transaction?
(a) US exports.
(b) US imports.
(c) Income earnings paid to foreign holders of US assets.
(d) US aid to a foreign country.
(e) US purchases of foreign assets.

(7.) [Question (7.) related to material that we won't cover in 2002.]

(8.) The equation for calculating real GDP is:

(a) Real GDP = $\frac{\text{Nominal GDP}}{\text{price index for GDP}}$ *times* 100.

(b) Real GDP = $\frac{\text{price index for GDP}}{\text{constant dollar GDP}}$ *times* 100.

(c) Real GDP = $\frac{\text{Nominal GDP}}{\text{constant dollar GDP}}$ *times* 100.

(d) Real GDP = $\frac{\text{constant dollar GDP}}{\text{price index for GDP}}$ *times* 100.

(e) Real GDP = $\frac{\text{price index for GDP}}{\text{Nominal GDP}}$ *times* 100.

(9.) [Question (9.) related to material that we won't cover in 2002.]

(10.) The law of demand implies that, as the price of beer increases,

(a) demand for beer shifts upward.
(b) demand for beer shifts downward.
(c) the quantity of beer demanded increases.
(d) the quantity of beer demanded decreases.
(e) the quantity of beer supplied increases.

(11.) In an economy where the marginal propensity to consume (mpc) is .8, an upward shift of (fixed, lump-sum) taxes would cause aggregate demand to rise by

(a) -.25 times the upward shift in taxes.
(b) - 1.25 times the upward shift in taxes.
(c) - 4 times the upward shift in taxes.
(d) - 5 times the upward shift in taxes.
(e) - 8 times the upward shift in taxes.

(12.) Which of the following statements is most clearly false if stock market prices really behave according to the Firm Foundations theory?

(a) The stock market is an efficient asset market.
(b) A high stock market price (i.e. high relative to the company's current earnings) indicates a productive, fast growing economy.
(c) Stock prices are determined through a "random walk."
(d) High stock market prices indicate an overvalued "bubble."

(e) Investors base their valuations of stocks primarily on the expected net present value of the stock.

(13.)	Dec. 20th	Dec. 21st
Nintendo stock price		
At the end of the day	$19	$17

You are given the above information about Nintendo's (owners of Pokémon) stock price, and on Dec. 22nd you and the whole world learn positive news about Pokémon, which everyone believes will increase Nintendo's stock price by $2. Random walk theory says your best guess as to the price of Nintendo stock at the end of Dec. 22nd is

(a) $15.
(b) $17.
(c) $18.
(d) $19.
(e) $21.

(14.) "A free lunch, paid for by somebody else, is not really free because you have to spend time eating it." This is an example of

(a) opportunity cost.
(b) the marginal principle.
(c) the principle of diminishing returns.
(d) the spillover principle.
(e) the reality principle.

(15.) Using the interest rate to discount future returns from a stock, in calculating the net present value of the stock, is an example of

(a) opportunity cost.
(b) the marginal principle.
(c) the principle of diminishing returns.
(d) the spillover principle.
(e) the reality principle.

[One TA in 1999 was a Charley Brown fan, hence Questions (16.) and (17.)]

For Questions (16.) and (17.), you are given the following information by the Great Pumpkin about the Pumpkin Patch:

	2005	2006
Price index (base year = 100)	100	106

Nominal GDP	$200	$240
Real GDP	$200	$226
Nominal interest rate	4%	4%

(16.) If the only good produced in the Pumpkin Patch is pumpkins, and 20 pumpkins are produced in 2006, what is the price of pumpkins in 2006?

(a) $106/20 = $5.30 a pumpkin.
(b) $226/20 = $11.60 a pumpkin.
(c) $240/20 = $12.00 a pumpkin.
(d) $106 a pumpkin.
(e) $240 a pumpkin.

(17.) If Snoopy borrowed $100 from Linus in 2005 at the going rate of interest and paid it back in 2006, then the real rate of interest Snoopy paid would be

(a) 24 percent.
(b) 10 percent.
(c) 4 percent.
(d) zero percent.
(e) minus 2 percent.