ECON 1010 Principles of Macroeconomics
Exam #3

Section A: Multiple Choice Questions. (30 points; 2 pts each)

#1. In an open economy where government spending was $30 billion, consumption was $70 billion, taxes were $20 billion, and GDP was $100 billion this year, investment spending was $10 billion. As a result, there was:

    a) net capital inflow of $10 billion.
    b) net capital outflow of $10 billion.
    c) net capital inflow of $20 billion.
    d) net capital outflow of $20 billion.

#2. There is a _____ relationship between the amount of loanable funds demanded and the rate of interest.

    a) positive
    b) direct
    c) negative
    d) both positive and negative.

#3. Which is false? When there is an increase in

    a) the government budget deficit, the total amount of borrowing falls.
    b) private savings, the interest rate decreases.
    c) government budget deficit, the private investment is crowded out.
    d) private savings, the total amount of borrowing increases.

#4. If the marginal propensity to save (MPS) is small, it will

    a) make the spending multiplier smaller.
    b) make the spending multiplier larger.
    c) not affect the value of the spending multiplier.
    d) increase the interest rate.

#5. Alice's disposable income increases by $1000, and she spends $600 of it. Alice's

    a) MPS is 0.4 and she saves $400.
    b) MPC is 0.4 and she saves $400.
    c) MPS is 0.4 and she saves $600.
    d) MPC is 0.6 and she consumes $400.

#6. The following table shows values of GDP, disposable income, consumption, planned investment, and planned aggregate expenditures for a hypothetical economy. The MPC is 0.8 for this economy. At which income level would there be positive unplanned investment?

Real GDP	Disposable income	Consumption	Planned investment	Planned aggregate expenditure
		(Billions of Dollars)		
0	0	16	4	20
20	20	32	4	36
40	40	48	4	52
60	60		4	
80	80		4	
100	100		4	
120	120		4	
140	140		4	

    a) $140 billion
    b) $100 billion
    c) $80 billion
    d) $60 billion

#7. Aggregate demand will shift to the right, if:

    a) the aggregate price level increases.
    b) government purchases increases.
    c) there is an increase in taxes.
    d) there is a decrease in the money supply.

#8. A movement from point C on AD_2 to point A on AD_1 may have been the result of

Price level

Real GDP

(Figure showing AD₁ and AD₂ curves with points A, C, B, E)
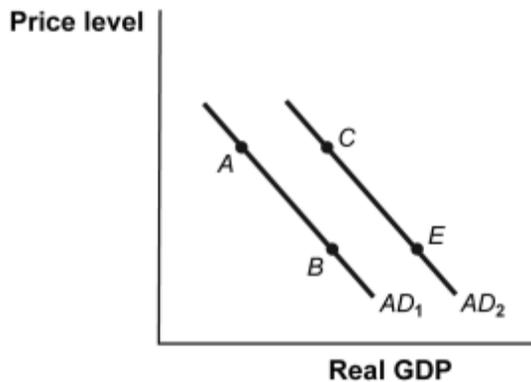
    a) an increase in investment demand due to optimistic GDP forecasts.
    b) a decrease in investment due to pessimistic GDP forecasts.
    c) decreases in the taxes paid by businesses.
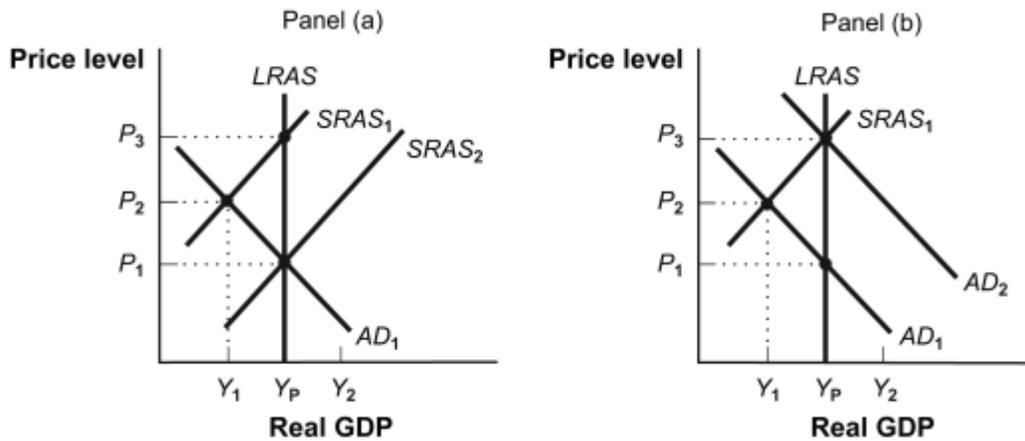   d) lower interest rates.

#9. In the long run, the aggregate price level has:

    a) no effect on the quantity of aggregate output.
    b) a positive effect on the quantity of aggregate output.
    c) a negative effect on the quantity of aggregate output.
    d) an impact on aggregate output but no impact on employment.

#10. As the manager of a professional football team, Sam just offered the kicker a two-year contract that pays $2 million per year. The kicker refuses the contract, stating he wants $3 million this year. If Sam offers $3 million this year, about how much will he have to offer next year to keep the present value of the contract the same as his original offer? Assume a 10% annual interest rate.

    a) $1 million
    b) $900,000
    c) $808,080
    d) $743,800

#11. If the economy is in equilibrium at Y_1 in panel (a) and the government increases spending, the result will likely be:

Panel (a)   Panel (b)

a) an increase in unemployment.
b) a decrease in interest rates.
c) inflation.
d) deflation.

#12. The term *liquidity* means that the:

a) asset is used in a barter exchange.
b) asset is used as the medium of exchange.
c) asset is readily convertible to cash without much loss of value.
d) market interest rate is too low.

#13. If the short-run macroeconomic equilibrium is _____ of the economy's potential output, then there is a(n) _____ and the aggregate price level is expected to _____.

a) to the right; inflationary gap; fall
b) to the right; recessionary gap; rise
c) to the left; inflationary gap; fall
d) to the left; recessionary gap; fall

#14. If the price level rises in the figure below, which will take place?
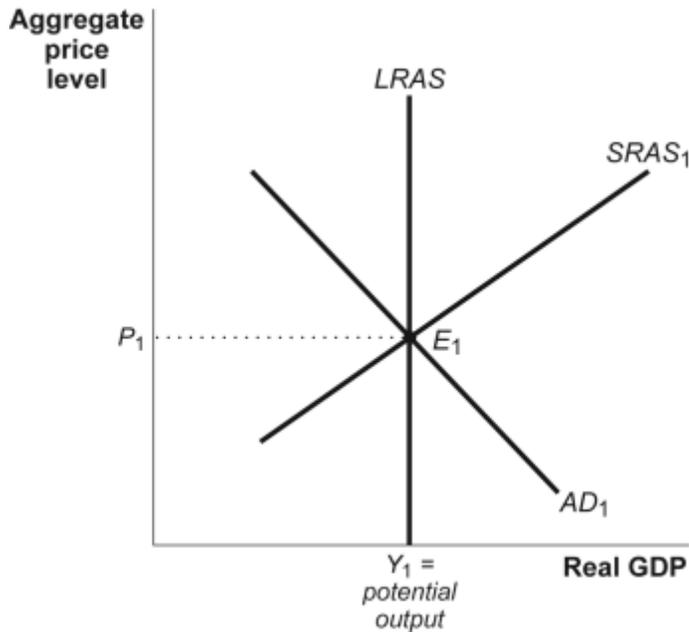
a) None of the answer choices provided will take place.
b) AD curve will shift to the left.
c) SRAS curve will shift to the right.
d) SRAS curve will shift to the left.

#15. Which would likely cause the short-run aggregate supply curve to shift to the left?

a) decrease in consumer spending
b) decrease in the price of imported oil
c) increase in the price of imported oil
d) increase in consumer spending

Section B: Short Answer Questions. (60 points)

1. **(20 pts) Market for Loanable Funds and the Time Value of Money**

   a) (10 pts) Assume the demand for loanable funds is $r = 60 - I$, where I is the quantity of loanable funds demanded for investment. Private savings is 75. Public saving can be calculated from government spending ($G = 100$) and taxes ($T = 75$). Savings does not depend on the interest rate. The economy is closed. Draw the demand and supply curves for loanable funds and find the equilibrium real interest rate, r^*. Show how an increase in taxes changes the graph and the equilibrium.

   b) (10 pts) You are presented with two potential investment project. Project #1 costs $100 now and gives a benefit of $120 two years from now. Project #2 costs $200 now and gives a benefit of $210 one year from now. The interest rate is 10%. What is your decision on the two projects? Explain.

2. (20 pts) Income-Expenditure Model and the Multiplier

a) (10 pts) Assume that planned investment is 100, government spending is 100, autonomous consumption is 100, and the MPC is 0.8. Taxes are zero. Find the equilibrium level of real GDP and show the equilibrium using the graphical version of the income-expenditure (Keynesian cross) model.

b) (10 pts) Congress passes a bill that cuts government spending in half. Find the new equilibrium, show this graphically, and confirm that the change in GDP is consistent with the multiplier formula.

3. **(20 pts) AD-SRAS-LRAS Model and Macroeconomic Shocks**

Assume congress passes new legislation to reduce CO_2 emissions from U.S. manufacturing companies. Use the AD-SRAS-LRAS model to show graphically how the legislation impacts the macroeconomy in the short and long run. Label your initial equilibrium "A", short-run equilibrium "B", and the long-run equilibrium "C". Write a corresponding paragraph explaining the transition of the economy if the government does not intervene. Then assume Janet Yellen and the Fed become concerned about inflation. What could the Fed do to counteract the impending inflation and what is the potential tradeoff of active monetary policy? Explain.

Section C: True or False (10 pts)

- The target inflation rate of the Fed is 2%.

- The current unemployment rate in the U.S. is 6%.

- The United States currently has positive net capital outflows.

- A common criticism of excessive government spending is that it reduces national savings, drives up real interest rates, and crowds out private investment.

- The Keynesian-cross multiplier only works for spending increases. It does not apply to spending decreases.