Multiple Choice

Please write your name at the top of the test. Answer all of the following questions. Make sure to circle only one of the choices. The multiple choice section is worth 9 points.

1. Which of the following is an example of the use of fiat currency?

a. Trading bourbon for a pair of boots

b. purchasing bourbon with a U.S. dollar redeemable in gold

c. Exchanging cigarettes in prison

d. Using Disney bucks to buy a picture of yourself on Space Mountain

2. True/False: The production function $Y = F(K, L) = K + L$ is constant returns to scale.

a. True

b. False

3. In June 2009, the BLS reported an adult population of 234.9 million, unemployment of 12.4 million, and employment of 141.6 million. Based on these numbers, the labor-force participation rate was

a. $154/234.9 \times 100$

b. $141.6/234.9 \times 100$

c. $141.6/154 \times 100$

d. None of the above is correct

4. Al's Aluminum Company sells $1 million worth of aluminum to Shiny Foil Company, which uses the aluminum to make aluminum foil. Shiny Foil Company sells $4 million worth of aluminum foil to households. The transactions just described contribute how much to GDP?

a. $1 million

b. $3 million

c. $4 million

d. $5 million

5. Using the following equations, determine the effect of a market price of $4.50.

$$Q_d = 50 - 3P$$
$$Q_s = 40 + 2P$$

a. There would be a shortage of 12.5 units, and the market price would fall.

b. There would be a surplus of 12.5 units, and the market price would fall.

c. There would be a surplus of 12.5 units, and the market price would rise.

d. The market would be in equilibrium at $4.50.

6. Suppose citizens want to hold equal amounts of currency and demand deposits. Additionally assume that banks hold 50% of deposits as reserves. What is the money multiplier, m?

a. 0.67

b. 1

b. 1.33

c. 1.67

7. Lead is an important input in the production of crystal. If the price of lead decreases, then we would expect the supply of

a. crystal to be unaffected.

b. crystal to decrease.

c. crystal to increase.

d. lead to increase.

8. The Karmic Deed Restaurant uses all of the following to produce vegetarian meals. Which of the following is an example of physical capital?

a. the owner's knowledge of how to prepare vegetarian entrees

b. the money in the owner's account at the bank from which she borrowed

c. the tables and chairs in the restaurant

d. the waiters who bring the food to the table

9. Suppose the U.S. undertakes a policy to increase its saving rate. This policy will likely

a. have no impact on the level of real GDP per person

b. immediately and permanently decrease the level of real GDP per person

c. immediately and permanently increase the level of real GDP per person

d. gradually raise the level of real GDP per person

10. True/False: The GDP deflator is an example of a Paasch index.

a. True

b. False

11.

Assets		Liabilities	
Reserves	$50,000	Deposits	$500,000
Loans	450,000	Capital	50,000
Securities	50,000		

Suppose the bank holds no excess reserves. Calculate the reserve ratio, rr.

a. 5%

b. 9.09%

c. 10%

d. 18.18 %

12. In 1886, a gold deposit was dicovered in South Africa. This had the effect of increasing the global money supply. What is the predicted effect on U.S. prices and U.S. nominal GDP assuming no growth in production, constant velocity, and the U.S. money supply is positively correlated to global money supply?

a. prices increase, nominal GDP decreases

b. prices increase, nominal GDP increases

c. prices decrease, nominal GDP decreases

d. prices decrease, nominal GDP increase

Short Response

Answer all of the following questions. Circle three of the six question numbers. They will count for two points. The others will count for one. The section in its entirety will count for 9 points.

13.

$$Y = 500$$
$$C = 100 + 0.5(Y - T)$$
$$I = 500 - 50r$$
$$G = 150$$
$$T = 100$$

a. Calculate public saving, private saving, and national saving.

b. Calculate the equilibrium interest rate.

Suppose the governement decreases purchase by 50.

c. Re-calculate public saving, private saving, and national saving.

d. Find the new equilibrium interest rate.

e. Illustrate graphically what happens to the investment and saving curves afte the change in government purchases.

14. Suppose the production function of Atlantis is $Y = K^{2/3}L^{1/3}$, where K is the amount of capital, and L is the amount of labor. The economy starts with 27 units of land and 64 units of labor. Use a calculator to find numerical answers to the following:

a. How much output does the economy produce?

b. What are the wage and the rental price of land?

c. What share of output does labor receive?

d. Suppose an outbreak of food poisoning displaces 56 units of labor but capital remains intact. What is the new level of output?

e. What are the new wage and the new rental price?

15. Consider two economies, Beta and Zeta. Each farmer in Beta can grow 1,000 pounds of apples or 500 pounds of oranges in a year. Each farmer in Zeta can grow 400 pounds of apples or 1200 pounds of oranges in a year.

a. What is Zeta's opportunity cost of producing 1 pound of apples? Beta's?

b. Who has the absolute advantage in the production of apples?

c. Who has the comparative advantage in the production of apples?

16. The following table gives hypothetical data for the quantity of electric scooters demanded and supplied per month.

Price per Electric Scooter	Quantity Demanded	Quantity Supplied
$150	500	250
175	475	350
200	450	450
225	425	550
250	400	650
275	375	750

a. Graph the demand and supply curves.

b. Find the equilibrium price and quantity.

c. Illustrate on your graph how an increase in the wage rate paid to scooter assemblers would affect the market for electric scooters. Make sure to appropriately label all curves and axes.

d. What would happen if there was an increase in the wage rate paid to scooter assemblers at the same time the tastes for electric scooters increased.

17. Suppose that the money demand function takes the form

$$(M/P)^d = L(i, Y) = Y/(5i)$$

a. If output grows at the rate of g and the nominal interest rate is constant, at what rate will the demand for real money balances grow?

b. What is the velocity of money in the economy?

c. If inflation and nominal interest rates are constant, at what rate, if any, will velocity grow?

d. How will a permanent (once-and-for-all) increase in the level of interest rates affect the level of velocity? How will it affect the subsequent growth rate of velocity?

4

18.

Year	Price of Cereal	Quantity of Cereal	Price of Milk	Quantity of Milk
2015	$4.00	100	$1.50	180
2014	4.00	120	2.00	200
2013	5.00	150	2.50	200
2012	6.00	180	3.50	240

a. Calculate nominal GDP for 2012 and 2013

b. Calculate real GDP for 2012 and 2013 using 2015 as the base year.

c. What is the GDP deflator for 2012 and 2013?

d. Using the GDP deflators you found in (d), what was the rate of inflation from 2012-2013?