

Exam 2

Pledge: "I pledge my honor that during this examination I have neither given nor received assistance, and that I have seen no dishonest work."

Signed:

Name:

The total number of points each question is worth out of a total of 200 points is indicated in ()s next to each question.

On graphs, label axes, equilibrium values, curves, and provide other relevant information.

On multiple choice questions, circle the letter of the best answer.

(30) 1. (a) Derive the LM curve equation (solving for  $r$  on the left hand side) from the following equations for the money market. Then substitute in the numerical values.

$$(1) M = M \quad \text{where } M = 20$$

$$(2) M^d = L_0 + L_Y Y - L_r r \quad \text{where } L_0 = 4, L_Y = 1/2, L_r = 1/4$$

where  $M$  is the money supply,  $M$  is money demand,  $L_0$  is autonomous money demand,  $L_Y$  is the sensitivity of money demand to income,  $L_r$  is the sensitivity of money demand to the interest rate, and  $r$  is the interest rate.

(5) 2. According to time series data, a decrease in income in the short run tends to be associated with:

- a. a fairly constant average propensity to consume
- b. a reduction in the average propensity to consume
- c. an increase in the average propensity to consume
- d. none of the above

(5) 3. Consider the slope of the LM curve and a rise in the sensitivity of money demand to the interest rate. Because of this increased sensitivity, for a given increase in income, the interest rate will \_\_\_\_\_ to re-equilibrate the money market.

- a. increase more
- b. increase less
- c. decrease more
- d. decrease less

(5) 4. Consider the slope of the IS curve and a rise in the marginal propensity to save. Because of this higher MPS, for a given reduction in the interest rate and increase in investment, income will \_\_\_\_\_.

- a. increase more
- b. increase less
- c. decrease more
- d. decrease less

(50) 5. Given the following income/expenditure model,

(1)  $C = a + bY^d$ , where  $Y^d = Y + TR - T$ ,  $TR = 10$ ,  $T = 20$ ,  
 $a = 247$ ,  $b = .7$

(2)  $I = I_0 + I_Y Y$  where  $I_0 = 90$ , and  $I_Y = .05$

(3)  $G = G$  where  $G = 100$

(4)  $X = X$  where  $X = 50$

(5)  $m = m$  where  $m = 60$

and where  $C$  is consumption,  $a$  is autonomous consumption,  $b$  is the marginal propensity to consume,  $Y$  is income,  $Y^d$  is disposable income,  $TR$  is transfers,  $T$  is taxes,  $I_0$  is autonomous investment,  $I_Y$  is the sensitivity of investment to income,  $G$  is government spending,  $X$  is gross exports, and  $m$  is imports.

(a) Solve the model for equilibrium  $Y$  before substituting in the numerical values.

(b) Now, substitute in the numerical values to determine the numerical value for equilibrium  $Y$ .

(c) What is the import multiplier for this model before substituting in the numerical values?

(25) 6. Graphically depict, on an IS/LM diagram, the impact of an increase in autonomous imports.

(25) 7. Graphically show, on an IS/LM diagram, the impact of an increase in autonomous consumption.

(55) 8. Utilize (show) the IS/LM diagram and the money market diagram and explain (with words) how and why an increase in the money supply affects real output.

**DID YOU REMEMBER TO CONSIDER THE PLEDGE?**