

14.02 Principles of Macroeconomics

Quiz # 1, Questions

Name: _____

Signature: _____

Date : _____

Read all questions carefully and completely before beginning the exam. There are two sections and ten Pages – make sure you do them all. Show your work on all questions if you want to receive partial credit. If your answer involves a graph, please label all curves and axes clearly; if we can't read the graph you will lose points on your answer. The quiz has a total of 100 points. Please mark one of the following options.

No notes, calculators or books may be used during the quiz. You have 2 hours to complete the quiz.

There are no blue books, you must respond in the space allotted to each question.

3. A high **marginal propensity to consume** increases the effect of any expansion in **autonomous spending**.

4. Progressive taxes (which mean that higher incomes are taxed at a higher rate than low incomes) will tend to make the economy less stable. As opposed to a flat rate, meaning that all levels of income are subject to the same proportional rate.

Part II. (Qs 1-2 are 5 pts. each. Qs 3-9 are 6 pts. each. 52 points total)

Questions 1-7 require you to solve mathematically. Questions 8-9 only require intuitive and graphical answers, but you can use equations if you find math helpful in explaining your answers.

Consider the following Good Market model in a closed economy, where we have the following demands of consumption and investment:

$$C = c_0 + c_1 Y^d$$
$$I = b_0 - b_2 i$$

Where: Y is GDP, C is consumption, Y^d is disposable income, i is the interest rate, I is gross domestic investment. Assume Taxes = T_0 , and assume government spending ($G=g_0$) to be exogenous. It is helpful if you define a variable A as:

$$A = c_0 + b_0 + g_0 - c_1 T$$

Money supply is fixed ($M^S = \bar{M}$). Also assume the money demand is given by:

$$M^d = m_0 + m_1 Y - m_2 i$$

This economy faces a problem, every few years consumers become very scared of the possibility of war and accumulate money stocks, so that m_0 increases by Δm_0 . This increases money demand in the economy.

1. Solve for the slope of the IS in the i - Y space. What is the meaning of the IS curve?

4. Solve for the equilibrium with a “war scare”. Call this output level Y^W . Calculate the difference $Y^* - Y^W$.

5. How does the “war scare” affect the equations and geometric positions of the IS and the LM. Do they move? Do they change in slope?

Now assume that the government decides not to change the tax structure (it stays with the old T_0) but it decides to change the way it sets its spending every year. In particular it decides that government spending will move according to:

$$G = g_0 + g_1(Y - Y^*)$$

8. Does the slope of the IS or the LM change? How?

9. Does the new fiscal policy have any affect on the stability of output? Explain.

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