

Part I - Definitions. Define each of the following (3 points each, 18 points total).

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| 1. Quantity equation | 4. Autonomous money demand |
| 2. Aggregate demand or expenditures | 5. LM curve |
| 3. Policy effectiveness | 6. Crowding out |

Part II - Short Answer. Answer each of the following questions (9 points each, 36 points total).

1. How do defensive and dynamic open-market operations differ? How do primary, seasonal, and secondary credit differ? Why doesn't the Fed use changes in reserve requirements to manage the money supply?
2. What is the money demand function in the classical model? Does the interest rate play a role in this model of money demand? Explain.
3. Show graphically and explain intuitively how an increase in the money supply affects income and the interest rate in the IS-LM model.
4. Show that the Fed cannot continuously hit both a money supply target and an interest rate target, i.e. that it must choose one or the other.

Part III – Essays and problems. Answer THREE of the following questions (15 points each, 45 points total)

1. (a) Explain why the demand curve for reserves slopes downward. (b) Explain the shape of the supply curve for reserves. (c) Explain and show graphically how the Fed uses discount rate policy to limit the amount the federal funds rate can rise in response to unexpected changes in the supply or demand for bank reserves.
2. According to Baumol, the transactions demand for money depends upon the interest rate as well as nominal income. Explain why the transactions demand for money depends upon the interest rate. Why is this important?
3. (a) Derive the LM curve and explain intuitively why it slopes upward. (b) Explain why the LM curve is vertical when money demand is unaffected by changes in the interest rate. Is fiscal policy effective in this case? What about monetary policy? Explain.
4. Use the IS-LM model to show that fiscal policy becomes more effective relative to monetary policy as investment becomes less sensitive to the interest rate. Explain the result intuitively. What does this imply about the use of monetary and fiscal policy over the business cycle?