Problem 1. What is the definition of demand for money?

(a) The amount of money people are willing and able to hold

(b) The amount of money people are willing to hold

(c) The amount of money people are willing to borrow

(d) The amount of money people actually hold

(e) None of the above

Problem 2. What is the definition of supply of money?

(a) The amount of money that people are willing and able to lend out

(b) The amount of money printed by the government

(c) The amount of money held in reserve by banks

(d) The amount of money that the non-bank public actually hold

(e) None of the above

Answer 1: a. In other words, demand for money is a fraction of a person's wealth that they want to hold as money.

Answer 2: d. The supply of money is the total amount of currency and bank deposits that people are firms hold at a point in time.

Problem 3. Fred's total wealth is equal to \$130,000. He is currently holding \$60,000 of his wealth in money and wants to hold \$90,000 in bonds. Fred has

(a) excess demand for bonds equal to \$20,000

(b) excess supply of bonds equal to \$20,000

(c) excess demand for bonds equal to \$40,000

(d) excess supply of bonds equal to \$40,000

(e) none of the above.

Answer 3: a. He's holding \$60,000 in money, and therefore must be holding (i.e. supplying) $130k - 60k = 70,000$ in bonds. He wants to hold (demands) $90,000$ in bonds. Therefore he demands $20,000$ excess in bonds.

Problem 4. What is the best way to characterize the classical theory of demand for money?

(a) According to classics, people hold money because they cannot afford buying stocks and bonds

(b) According to classics, people hold money mostly for unforeseen future transactions

(c) According to the classical economists, people hold money predominantly to buy goods and services

(d) Demand for money is the amount of reserves bank are willing and able to hold at the Fed.

Answer 4: c. Classical economists emphasized the medium-of-exchange property of money. According to classics, money has no other use but to facilitate transactions in goods and services.

Problem 5. Keynes argued that

(a) The classical economists had neglected the function of money as a medium of exchange

(b) Classical economists had neglected the function of money as a unit of account

(c) The classical economists had neglected the function of money as a store of value.

Answer 5: c. This is the **liquidity preference theory**. The benefit from holding money is that it's liquid. The benefit from holding bonds is that they give a return based on their interest rate. Liquidity preference theory says that people try to balance the convenience of the liquidity of money with the interest income from bonds.

Problem 6. Which of the following statements is correct?

(a) If, all else the same, the price level increases by 5%, then the demand for money will increase by 5%.

(b) If, all else the same, real GDP increases by 5%, then the demand for money will increase by 5%.

(c) If, all else the same, the nominal GDP increases by 5%, then the demand for money will increase by 5%.

(d) Any of the above is a correct answer.

(e) None of the above.

Answer 6: d.

- If the price level is higher, then people have to hold more money in order to buy the things they need to buy. There will be a proportional increase in money demand.
- If real GDP increases by 5%, then people have more (real) income, and thus will want to hold more money. Therefore the demand for money will increase—we assume this increase will also be proportional.
- Nominal GDP is $P \times Y$. If $NGDP$ increases by 5%, then it must be the sum of the changes in P and $RGDP$ have increased by 5%. From the above two answer, this means that money demand will also increase by 5%.

Problem 7. According to Keynes, what will happen if the interest rate increases, all else the same?

(a) Demands for both money and bonds will decrease

(b) Demands for money will increase but demand for bonds will decrease

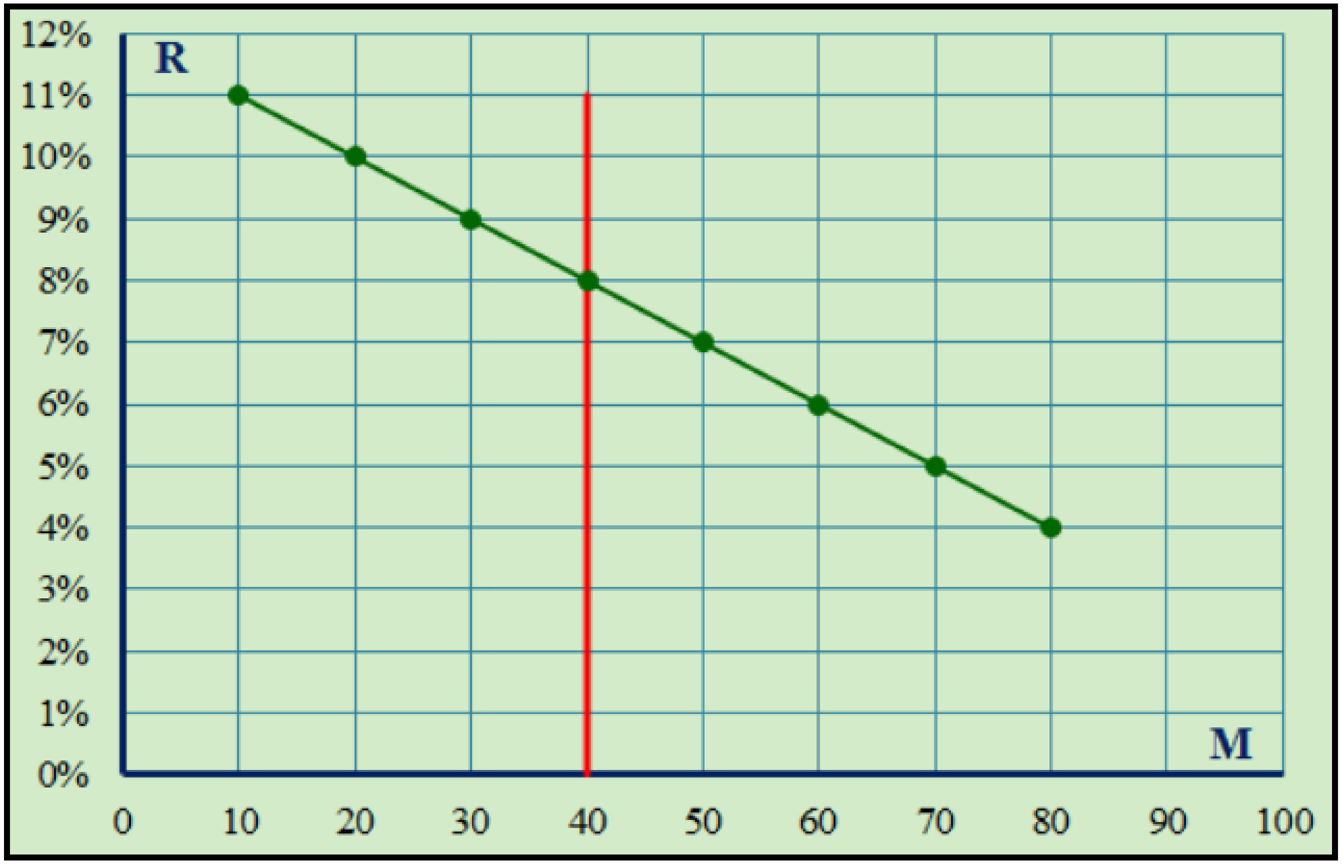
(c) Demands for both money and bonds will increase

(d) Demand for money will decrease but demand for bonds will increase

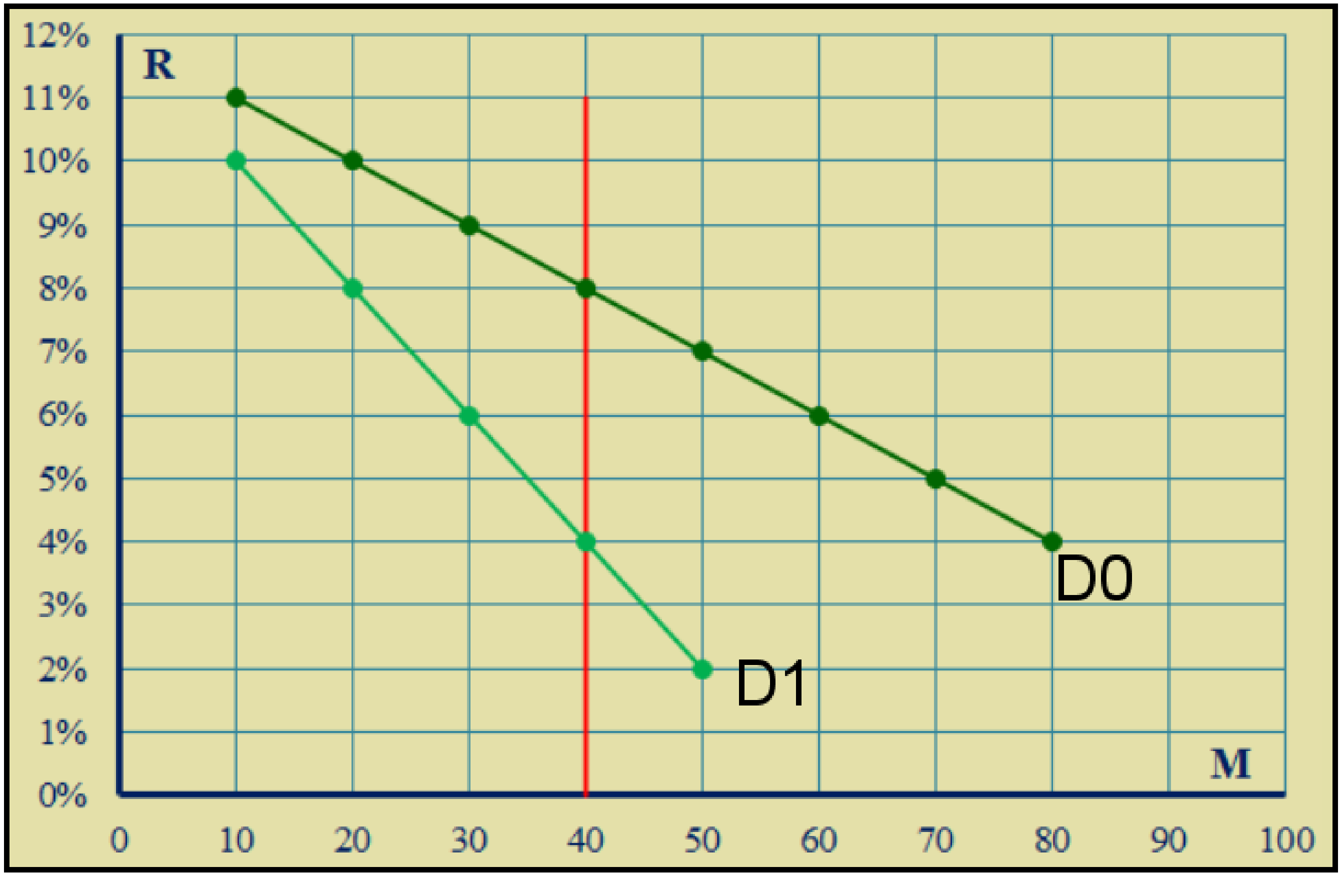
(e) None of the above

Answer 7: d. A higher interest rate means that bonds have a high return. This makes it more difficult to justify holding onto money, since the bonds have a high return and money has no return. Thus, less demand for money and more demand for bonds.

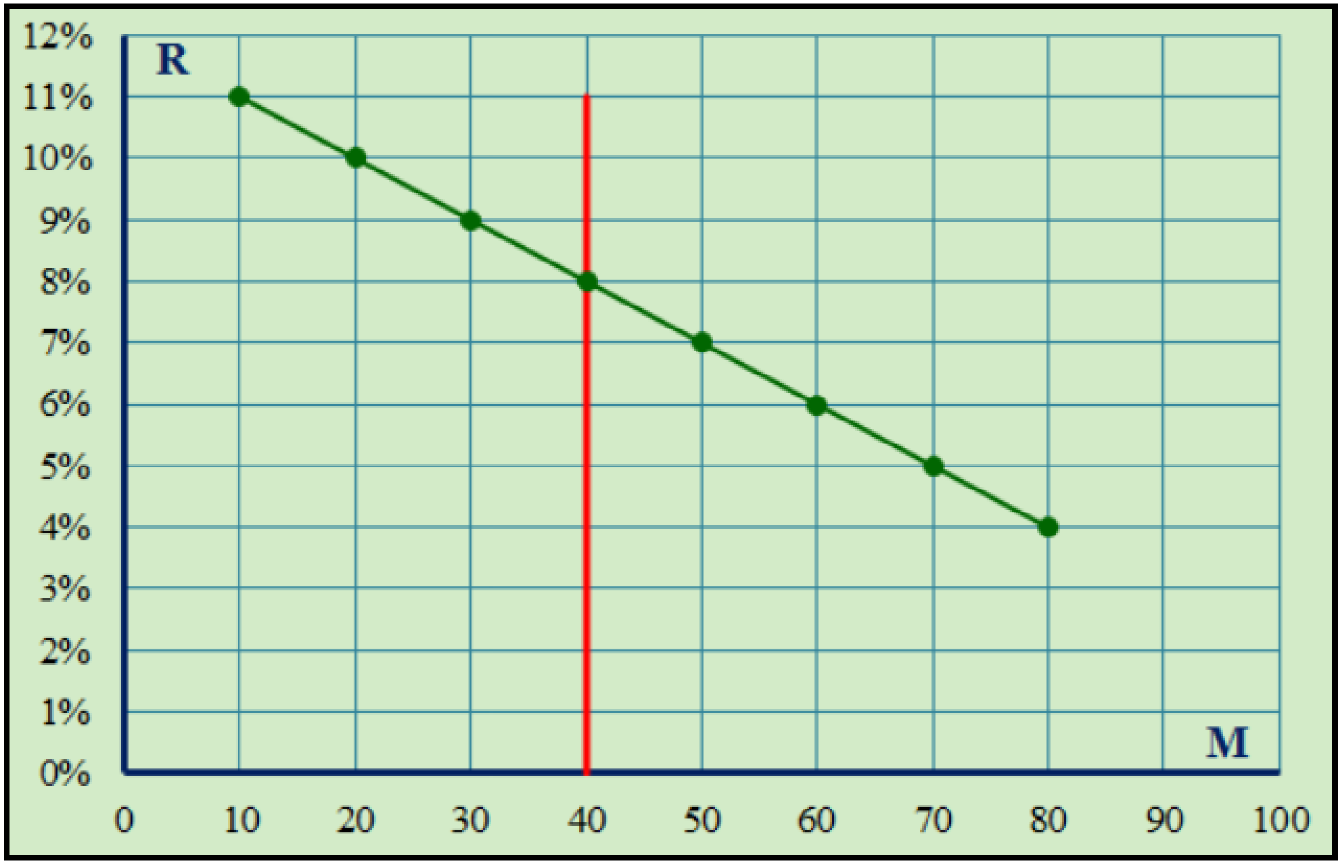
Problem 8. Consider the money market graph below. If the level of prices or real GDP fall by 50%, then find the new equilibrium real interest rate.



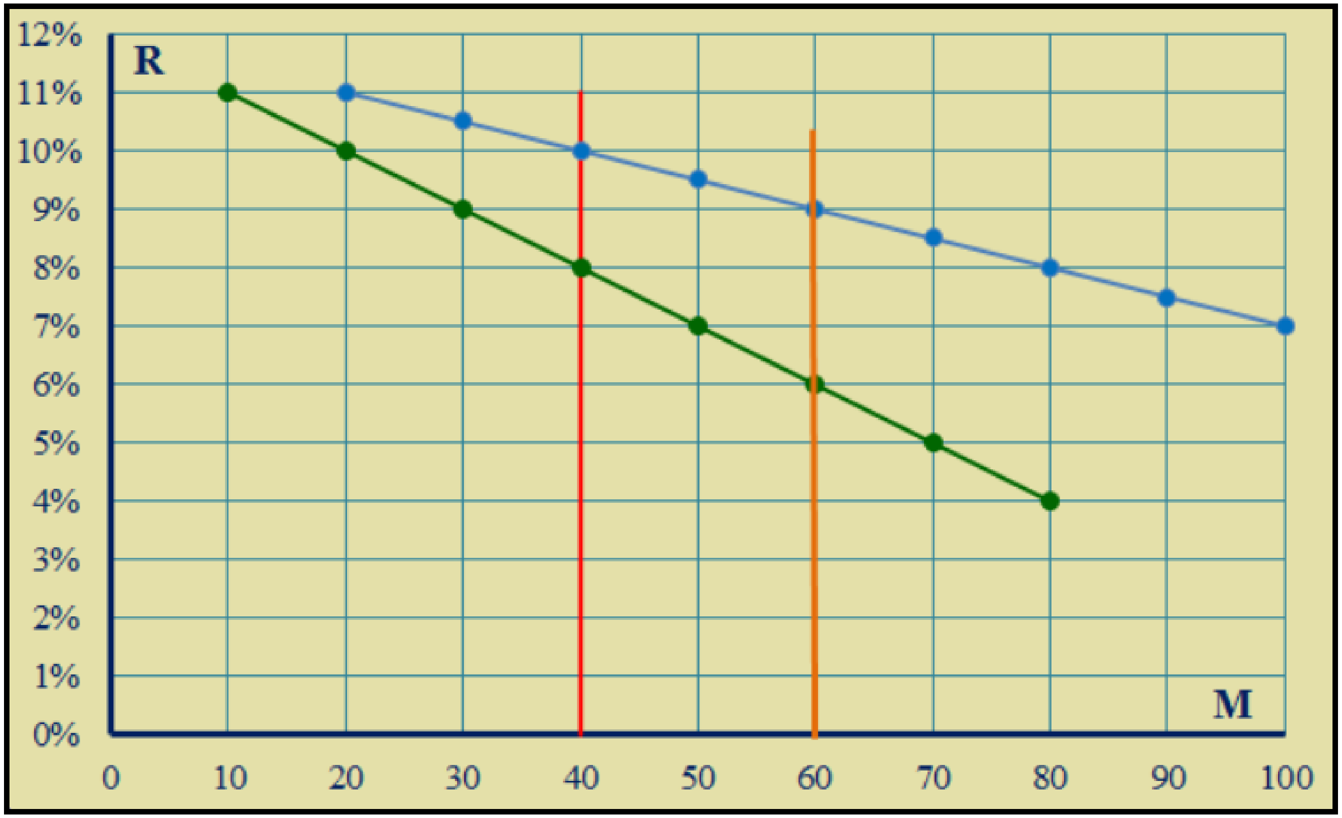
Answer 8. For every interest rate, cut the money demanded in half. Then the demand curve becomes



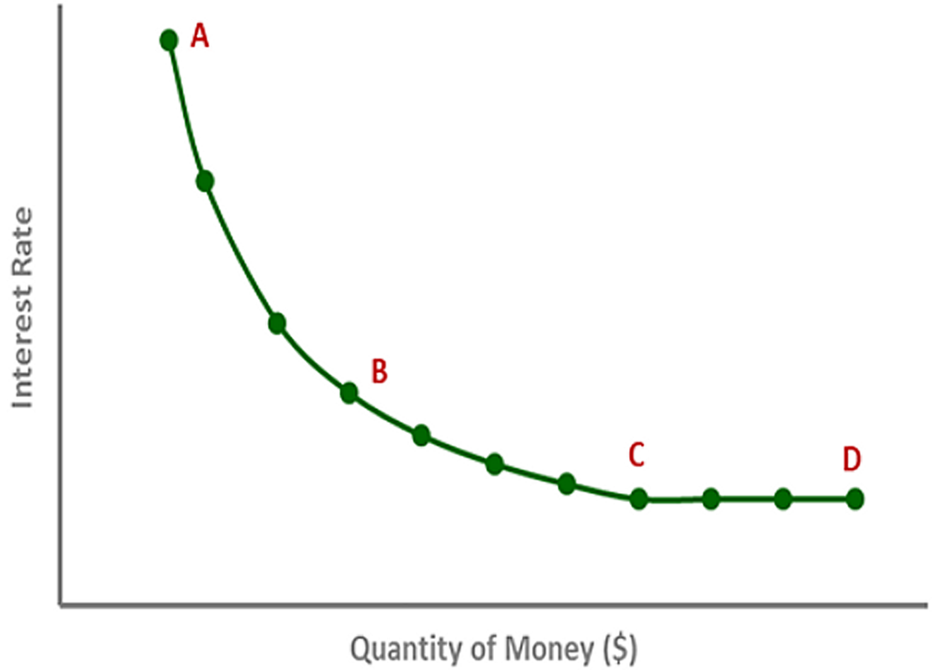
Problem 9. Consider the money market graph below. If the Fed increases the supply of money by 50% through an open market purchase, and at the same time the nominal GDP increases by 100%, then what's the new equilibrium interest rate?



Answer 9. The money supply will increase to 60. Money holding at every interest rate will double.



Problem 10. Consider the demand-for-money function below.



Which segment is called "liquidity trap"?

(a) AB

(b) BC

(c) CD

(d) AC

(e) None of the above

Answer 10: **c.** If the money supply is at C but is increased to D, then there will be practically no change in the equilibrium interest rate. This is what is meant by a liquidity trap.

Problem 11. Suppose we observed that the interest rate increased in a month. Which of the following events would be consistent with this observation?

(a) All else the same, demand for money has increased in that month

(b) All else the same, both demand for money and supply of money have increased in that month, but the supply has increased at a lower rate

(c) All else the same, demand for money has increased in that month but the supply has decreased

(d) Any of the above could be correct

(e) None of the above

Answer 11: d. Draw each scenario to see.

Problem 12. Ceteris paribus, what will happen to the equilibrium interest rate in the liquidity preference model if commercial banks decide to hold more excess reserves?

(a) The interest rate will increase

(b) The interest rate will decrease

(c) The interest rate will remain the same

(d) Need more information to answer

(e) None of the above

Answer 12: a. If banks hold more excess reserves, then banks are making fewer loans, and therefore the money supply is smaller. This means R will be higher.

Problem 13. What will happen in the Keynesian liquidity preference model if the price level increases by 4% and the money supply increases by 5%?

(a) Demand for money and the supply of money will increase at the same rate and the equilibrium interest rate will remain the same

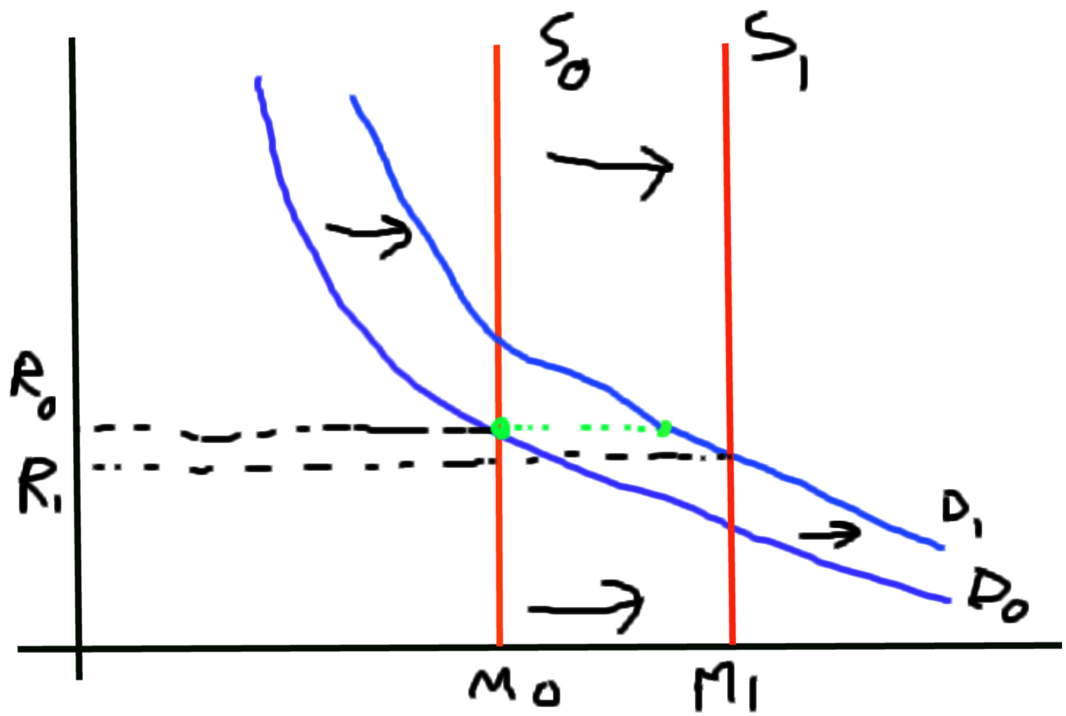
(b) Demand for money will increase at a higher rate than supply of money and the equilibrium interest rate will increase

(c) Demand for money will increase at a lower rate than supply of money and the equilibrium interest rate will decrease

(d) Demand for money will increase at a higher rate than supply of money and the equilibrium interest rate will decrease

(e) None of the above

Answer 13: c. The easiest way is to start at the original equilibrium point. Then increase the quantity demanded by some amount and call that 4%. Then use that point to make a new downward sloping demand curve. Now go back to the original equilibrium and increase the quantity of money supplied by a little bit more and call that 5%. You'll see that the interest rate will now be lower.



Problem 14. What will happen to the equilibrium interest rate in the Keynesian liquidity preference model for sure during a stagflation?

(a) Demand for money will increase resulting in an increase in the equilibrium interest rate

(b) Demand for money will decrease resulting in a reduction in the equilibrium interest rate

(c) Demand for money will not change

(d) We cannot answer this question without additional information

(e) None of the above

Answer 14: d. A **stagflation** means there is inflation—the price level is rising—and there is simultaneously a recession—real GDP is falling. The inflation implies an increase in the demand function, whereas the recession implies a decrease in the demand function. So we need to know which effect is larger.