

1. The money demand is affected by

- (a) the interest rate.
- (b) the price level.
- (c) real national income.
- (d) All of the above.
- (e) Only A and C.

Answer (d)

2. Holding the price level constant, a rise in

- (a) GDP decreases money demand for a given interest rate, moving the money demand schedule to the right.
- (b) GDP decreases money demand for a given interest rate, moving the money demand schedule to the left.
- (c) GDP raises money demand for a given interest rate, moving the money demand schedule to the right.
- (d) GDP raises money demand for a given interest rate, moving the money demand schedule to the left.

Answer (c)

3. If there is initially

- (a) excess demand for money, the interest rate falls, and if there is initially an excess supply, it rises.
- (b) excess supply of money, the interest rate falls, and if there is initially an excess demand, it rises.
- (c) excess supply of money, the interest rate increases, and if there is initially an excess demand, it falls.
- (d) excess supply of money, the interest rate falls, and if there is initially an excess demand, it further falls.
- (e) None of the above.

Answer (b)

4. Which one of the following statements is the most accurate?
- (a) A decrease in the money supply lowers the interest rate, while an increase in the money supply raises the interest rate, given the price level and GDP.
 - (b) An increase in the money supply lowers the interest rate, while a fall in the money supply raises the interest rate, given the price level.
 - (c) An increase in the money supply lowers the interest rate, while a fall in the money supply raises the interest rate, given the level of GDP.
 - (d) An increase in the money supply lowers the interest rate, while a fall in the money supply raises the interest rate, given the price level and GDP.
 - (e) None of the above.

Answer (d)

5. Suppose that a five-year 10% coupon bond with ¥1,000 face value sells for ¥1,200 today. (“5% coupon” means that the bond pays 50(=1,000×0.05) yens of coupon at the end of every year.)

- (a) Write down the formula that is used to calculate the interest rate on this bond.

$$\frac{100}{1+i} + \frac{100}{(1+i)^2} + \frac{100}{(1+i)^3} + \frac{100}{(1+i)^4} + \frac{100+1,000}{(1+i)^5} = 1,200$$

- (b) If this bond sells for ¥1,500, the interest rate is higher or lower? Simply explain why.

In the above equation, if the right hand side (the price of this bond) increases, the left hand side must also increase so that the equality will hold. It implies that, for the given timeline of cash flows, the interest rate must fall.

More intuitively, after a rise in the price of the bond, you have to pay more money for the *same* timeline of cash flows. This implies that each one yen earns smaller interest, that is, the interest rate is lower.