1. What are the three functions of money? Evaluate whether "gold" can effectively serve these three functions.

① mediam of exchange = people accept it as payment

② store value = can transfer purchasing power into the future

③ unit of account = compare & tell values

∴ gold can effectively serve these three functions

2. Suppose that people hold 1000$ as cash, 1000$ as demand deposits, and 1000$ as savings; calculate narrow money and broad money. How much is the "money supply" in the economy?

narrow money = 1000 + 1000 = $2000 ※

broad money = 2000 + 1000 = $3000 ※

∴ the money supply in the economy is $2000.

3. What is Fractional Reserve System (FRS)? Explain how money can be created through this system.

- fractional reserve system = a system in which only a fraction of the deposits are avaliable for withdrawal
- money is created by increasing the money supply that is avaliable for usage (money multiplier)

4. Suppose that the reserve ratio is 20% and that Mr.Bean has 100$ CASH and 200$ DEPOSIT. Assume that people deposits all their money, and that the banks lend all their deposits; answer the following questions.
a) What does the reserve ratio of 20% means?
b) WITHOUT the fractional reserve system (FRS), how much is the money supply?
c) Calculate the money multiplier.
d) WITH the FRS, how much is the TOTAL DEPOSIT within the economy?
e) How much deposit is created from the FRS?
f) WITH the FRS, how much is the money supply?

a) it means that the bank must keep 20% of the deposit at Central bank as reserves

b) $M_1 = 100 + 200 = \$300$ ※

c) money multiplier $= \frac{1}{RR} = \frac{1}{0.2} = 5$ ※

d) $5(200) = \$1000$ of total deposit ※

e) $1000 - 200 = \$800$ deposit created ※

f) $M_s = 1000 + 100 = \$1100$ ※

5. Explain three roles of central banks.

① control monetary policy (contractionary & expansionary)
② assist commercial banks that are in difficult positions
③ manage exchange rates

6. What is Liquidity? What is the most liquid asset? Explain the three reasons (according to Keynes) why people prefer to have liquidity. Which of these three reasons causes the money demand curve to be downward-sloping?

- liquidity = how easy assets can be converted into mean of exchange
- cash is the most liquid asset
- ① transaction demand – daily use
  ② precautionary demand – unexpected use
  ③ speculative demand – future investment
- speculative demand caused the demand curve to be downward sloping because it depends on interest

7. How does each of the followings affect the money demand curve? (That is, will it shift the curve, or is it movement along the curve?) Also, explain your reasoning.
a) People become poorer.
b) Goods become more expensive.
c) People prefer to hold less cash due to debit/credit cards
d) The central bank decreases interest rate.

a) shift the curve ; bc it is a Δ in income
b) shift the curve ; bc it is a Δ in price
c) shift the curve ; bc it is a Δ in preference
d) movement along the curve ; bc it is a Δ in i

8. Why is the money supply curve a vertical line? How does each of the followings affect the money supply curve? <u>Also, explain your reasoning.</u>

a) People deposit more money.

b) The central bank increases reserve ratio.

c) The central bank decreases discount rate.

d) The central bank decreases interest rate.

- because the money supply is constant (set by the central bank)

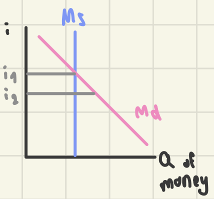
  a) does not affect ; not controlled by the central bank

  b) affects ; lower the money supply

  c) affects; lower the money supply

  d) affects; increase the money supply

9. Suppose that the central bank wants to lower interest rate to boost the economy. Explain, together with the money market diagram, how the central bank can achieve this <u>through an open market operation.</u>



- when i is lower, the demand for cash will be higher. This is possible through the open market operation because by the CB buying bonds from the public will increase the money supply

10. Suppose that the money market is NOT in equilibrium because the current interest rate is higher than the equilibrium rate, i > i*. Explain how the money market adjusts to reach the equilibrium.

- if the i is too high then there will be surplus of cash so the CB needs to force i down using the expansionary monetary policy. Thus, increasing the demand for cash and bring the money market into equilibrium again

11. Write down the equation for the Quantity Theory of Money. Explain how this equation can be used to explain inflation.

MV = PY ; with the V & Y being a constant. when M increase P will also increase. So, increasing the money supply will cause an increase in price level and creates inflation.

12. Let the money demand function be $M_D = 200 - (1000)i$ and the money supply function be $M_S = 100$.

a) Calculate the equilibrium interest rate, i*. (Hint: set $M_D = M_S$ and solve for i*)

b) Suppose that new money demand function becomes $M_D = 400 - (1000)i$. What can be inferred about the transaction and precautionary demand?

a) $M_D = M_S \rightarrow 200 - 1000i = 100$

$-200 \qquad -200$

$\dfrac{-\cancel{1000}i}{-\cancel{1000}} = \dfrac{-100}{-1000}$

$\boxed{i^* = 0.1}$

b) The transaction & precautionary demand increased.