Introduction to Macroeconomics · M7 · 27 Mar 2012

1. Real GDP and real GDP per capita have in common that both are
(a) estimates of the underground economy.
(b) accounting identities.
(c) stock variables.
(d) None of the above

2. Which of the following variables can be taken as a measure of aggregate production in an economy?
(a) The real interest rate
(b) The nominal GDP divided by the real GDP
(c) The money multiplier
(d) None of the above

3. By definition of CPI-based inflation rate, that the CPI-based inflation rate rises means that
(a) the general price level diminishes.
(b) there is an increase in unemployment.
(c) the GDP deflator necessarily goes up.
(d) None of the above

4. Which sentence is not true?
(a) GDP at current prices is a nominal variable.
(b) The unemployment rate is not a nominal variable.
(c) A fall in the liquidity ratio raises the money multiplier.
(d) Slovenia is a member of the eurozone but Slovakia is not.

5. Define the government deficit as $G + TR - T$ and let NX denote net exports. Then
(a) the government deficit cannot be positive and net exports negative.
(b) the government deficit and net exports cannot both be zero.
(c) if investment I is zero, then the government deficit is equal to net exports.
(d) if private savings S equal investment I, then the government deficit is equal to minus net exports.

6. The concept of discount factor is directly related to
(a) the Fisher equation.
(b) the reserve ratio or the liquidity ratio.
(c) the monetary aggregate M3.
(d) None of the above

7. The money multiplier (as presented in class) relates
(a) the nominal interest rate to the discount factor.
(b) the interest rate to the inflation rate.
(c) the unemployment rate to the monetary base.
(d) the money stock M1 to the monetary base M0.

8. Which sentence is not false?
(a) The rate of growth of real GDP per capita is smaller than the rate of growth of nominal GDP.
(b) The unemployment rate is the real interest rate minus the inflation rate.
(c) If the government runs a budget deficit, then the economy must necessarily run a trade deficit.
(d) The GDP deflator is a price index.

9. Which sentence is true?
(a) The CPI-based inflation rate can never be equal to the GDP deflator inflation rate.
(b) An economy can never experience inflation and disinflation at the same time.
(c) That an economy has lending capacity means that the government runs a budget surplus ($T > G + TR$).
(d) The above three sentences are not true.

10. Financial assets A and B differ only in two properties. Which of the following sentences is more likely to be true?
(a) If A is as liquid as B, then B should be more profitable than A.
(b) If A is riskier than B, then B's rate of return should be higher than A's.
(c) If A is more liquid than B, then B should be riskier than A.
(d) If A's rate of return is smaller than B's, then B should be less liquid than A.

11. The money multiplier process is a process involving
(a) real GDP, the inflation rate, and unemployment rate.
(b) the nominal interest rate, the inflation rate, and the real interest rate.
(c) neither (a), nor (b), nor (d).
(d) loans, deposits, expenditures, and revenues.

12. What is not true about an expansionary open market operation?
(a) It is executed by the central bank.
(b) In the loan market model, it is represented by a shift of the supply of loans function to the right.
(c) It tends to cause an increase in the price of financial assets.
(d) It causes an increase in the interest rate.

13. The government budget deficit has increased. What event could neutralize the effect on the interest rate of that increase?
(a) A contractionary open market operation
(b) That the most important banks go bankrupt.
(c) That firms sell financial assets they own to finance new investment projects.
(d) An increase in unemployment combined with the closure of 20% of all the factories in the economy.

14. The nominal interest rate has fallen. What could not explain this result?
(a) That both the supply of loans and the demand for loans have shifted.
(b) That only the supply of loans has shifted.
(c) That only the demand for loans has shifted.
(d) That the supply of loans has shifted to the left and the demand for loans has shifted to the right.

15. The money multiplier may remain constant if
(a) both the liquidity ratio l and the reserve ratio r fall.
(b) both the liquidity ratio l and the reserve ratio r rise.
(c) the liquidity ratio l declines and the reserve ratio r does not change.
(d) the liquidity ratio l declines and the reserve ratio r rises.

Write your answers in minuscule letters · No answer: no penalty · Wrong answer: –1/3 of the value of a correct answer · Points: 40%

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

DNI number__________________ 1st Surname __________________ Name __________________

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1. [8%] Define the following concepts.

Nominal GDP

GDP deflator inflation rate

Open market operation

Real interest rate

Disinflation

2. [3%] Using the fundamental macroeconomic accounting identities, find net exports (NX) if S = 50, G = 20, TR = 5, and T = 30.

3. [3%] Find the approximate value of the GDP deflator inflation rate if real GDP has increased by 10% and nominal GDP has fallen by 5%.

4. [5%] **Answer only one**. (i) The discount factor is 0.6 and the price of a T-bill is 200. Given the relationship between the interest rate and the price of T-bills, find the face value of the T-bill. (ii) Find the present value of 200 if the interest rate is 2/3 (per one).

5. [5%] Find the money multiplier if the liquidity ratio is 0.1, the monetary base is 550, and *E* (currency held by the public) is 100.

6. [5%] Determine the amount of cash (*E*) and the amount of deposits (*D*) corresponding to a money stock M1 equal to 900 when the liquidity ratio is 0.5.

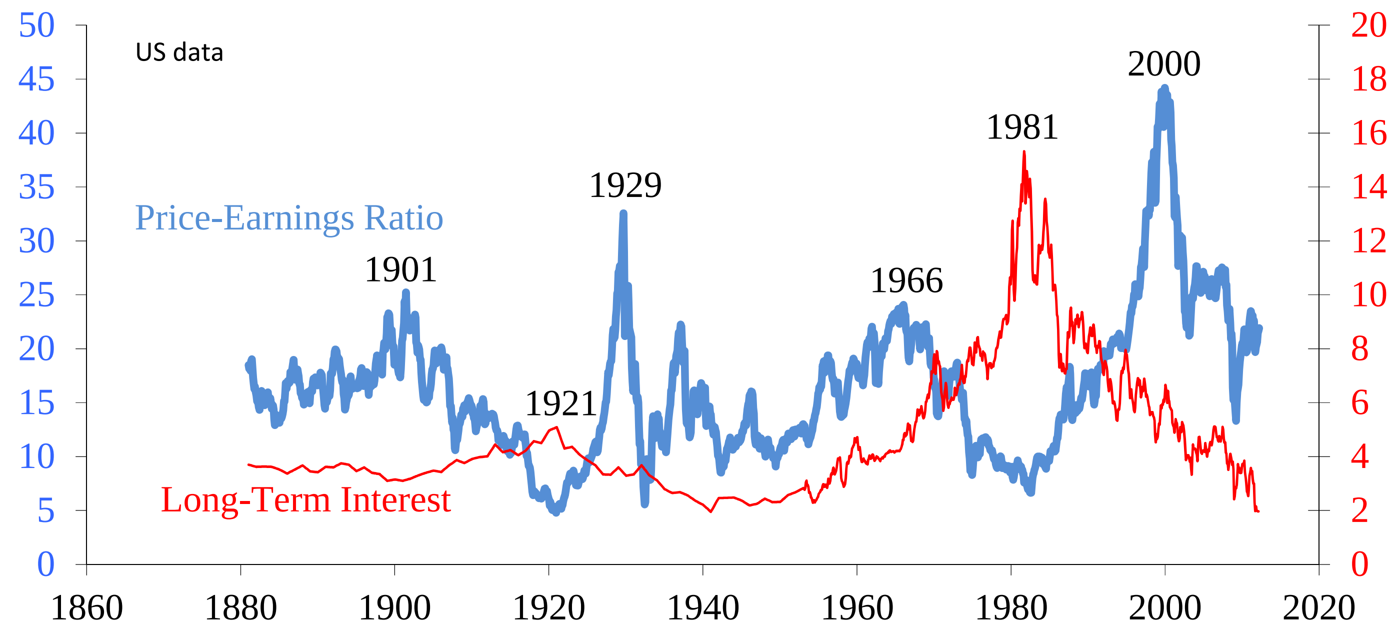
7. [4%] Find the real interest rate in a certain period if the nominal interest rate is 5%, the CPI at the beginning of the period is 200, and the GDP deflator at the end of the period is 220.

8. [6%] The real interest rate in a certain economy has been negative for the last five years. Explain if this evidence is consistent or not with the Fisher effect.

9. [6%] Explain how an increase in unemployment is likely to affect the money multiplier process.

10. [20%] (i) With the help of a graphical representation of the loan market, determine and explain the effect on the equilibrium interest rate of an increase in the number of people willing to purchase financial assets. (ii) Suggest two measures by the central bank that could neutralize that effect and indicate in a graphical representation of the loan market how these measures achieve the desired goal.

11. **Optional**. [10%] In the figure on the next page, consider the period 1975-1985. During the first part of the period (1975-81), the interest rate rose sharply, while the price-earnings ratio (or P/E ratio, which is a "measure of the price paid for a share relative to the annual net income or profit earned by the firm per share", http://en.wikipedia.org/wiki/P/E_ratio) fell. During the second part, the opposite is observed: the interest rate falls while the price of shares rises. Is there anything in the course that can explain this behaviour? If so, state that explanation.



http://www.econ.yale.edu/~shiller/data/ie_data.xls

12. **Optional**. [10%] A speculative bubble (market bubble or speculative mania) occurs when the price of a good or financial asset is systematically inflated with respect to what may be called its "intrinsic value". In this case, most of the trade in the market is carried out under the expectation that the price of the good or the financial asset will rise, so buyers typically buy expecting to be able to sell later at a higher price. A speculative bubble bursts when the price of the good or financial asset suddenly plummets (crashes) [for instance, the dot-com crash in stock prices in 2000; see figure above]. Explain why central banks generally respond to a stock market crash by conducting expansionary open market operations.