Introduction to Macroeconomics · M5 · 8 May 2014

DNI Number ________________________ 1st Surname ______________________________ Name __________________________

1. [2%, 1.5] Define briefly the concept of real GDP.

2. [2%, 1] Define briefly one of the following two concepts: securitization; financial depth.

3. [2%, 1.5] Define briefly the concept of consumer price index inflation rate.

4. [2%, 1.5] Explain briefly what the Fisher effect is.

5. [2%, 1.5] What is the meaning of the expression "M1 is endogenous"?

6. [3%, 2] Why foreign saving is represented by imports minus exports?

7. [2%, 1.5] What is meant by "impossible trinity"?

8. [2%, 1] Identify two members of the European Union that are not eurozone members and one eurozone member that does not belong to the European Union.

9. [1%, 1] What is the current value of the main interest rate set by the European Central Bank? An approximate answer is good enough.

10. [5%, 2] Using the fundamental macroeconomic identities, ascertain whether exports are higher than, smaller than, or equal to investment if: imports equal government expenditure; transfers equal taxes; and investment is half savings.

11. [5%, 2.5] Find the reserve ratio if the monetary base is 350, deposits amount to $1{,}000$, and the liquidity ratio equals $1/4$.

12. [3%, 1.5] Assuming that the relationship between the economy's interest rate *i* and the price of T-bills holds, find the price of T-bills (when issued) if their face value is $1{,}000$ and the discount factor (based on *i*) is $1/2$.

13. [3%, 1.5] By how much is the euro overvalued or undervalued with respect to its purchasing power parity level if $e = 2$ $/€ and the US price level doubles the eurozone price level?

14. [3%, 1.5] Find the real exchange rate if the nominal exchange rate is 2 $/€, the eurozone price level is $P = 500$, and the US price level is $P^* = 250$.

15. [5%, 3] Explain why the central bank cannot simultaneously control the interest rate *i* and the money stock M1.

16. [2%, 1.5] List three functions of a central bank.

17. [4%, 2.5] The price level today is 100; tomorrow, 200. By lending €1,000 today, you get €1,200 tomorrow. Calculate the corresponding <u>exact</u> real interest rate.

18. [2%, 2] Indicate something that the concepts of reserve requirement and open market operation have in common and something that differentiates them.

19. [2%, 1.5] Indicate something that the concepts of triangular arbitrage and spatial arbitrage have in common and something that differentiates them.

20. [2%, 1.5] Indicate something that the concepts of appreciation and devaluation have in common and something that differentiates them.

21. [22%, 10] Robin Hood tax. (i) Analyze graphically the effect on the equilibrium interest rate of establishing a tax on the sales of existing financial assets. It is the sellers who must pay the tax. The central bank and the government are both tax-exempt. (ii) Suggest a monetary policy measure by the central bank that could neutralize the change in the volume of liquidity found in (i).

22. [5%, 2.5] Is it possible for the euro to appreciate against the dollar in nominal terms but, at the same time, depreciate in real terms? Explain your answer.

23. [24%, 11] (i) Imagine that the wealthy Russians have their money on US bank accounts and that they come to believe that Russia is going to invade Ukraine. Suppose: (a) that those wealthy Russians know that, in case of invasion, the Obama administration will freeze the US bank accounts owned by Russians; (b) that they think that Swiss banks are a safer place for their money than Mother Russia; and (c) that there is no currency market to exchange dollars for Swiss francs. Analyze graphically the effect on the exchange rates rouble/Swiss franc and rouble/dollar of the belief that Russia is going to invade Ukraine. [Fact: the number of new opened private banking accounts in Switzerland by Russians is skyrocketing since the Ukraine crisis and there are many indications that Switzerland is not going to participate in eventual international sanctions against Russia.] (ii) Suggest an intervention on the currency market by the Central Bank of Russia that could offset the effect on the rate rouble/dollar found in (i).

24. [5%, 3] Explain the economic mechanism by means of which an increase in the liquidity ratio affects the money multiplier.