

## Introduction to Macroeconomics · Global exam · 21 May 2019

DNI Number \_\_\_\_\_ Surnames \_\_\_\_\_ Name \_\_\_\_\_

**WRITE YOUR ANSWERS TO QUESTIONS 1 TO 15 IN THE TABLE BELOW**

Questions 1 to 15 [15%]: correct answer, +1%; incorrect answer, -1%; no answer, -0.5%.

Write 'T' if you consider the sentence true and write 'F' if you consider the sentence false														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

1. One of the following two sentences is not true: (i) fiscal policy is not conducted by central banks; (ii) one of the functions of central banks is to raise or lower the taxes paid by firms or consumers.

2. All the monetary aggregates are financial assets created by the government or the central bank.

3. In the liquidity market model, a contractionary open market operation followed by an expansionary open market operation necessarily changes the equilibrium interest rate.

4. In the aggregate supply, aggregate demand model, a contractionary fiscal policy followed by an expansionary monetary policy causes a fall in the equilibrium inflation rate and, in general, a rise in the equilibrium GDP.

5. In the currency market model, an increase in the foreign interest rate could neutralize the effect on the equilibrium exchange rate of a fall in the domestic inflation rate.

6. If the exchange rate  $\text{€}/\text{\$}$  falls and the exchange rate  $\text{¥}/\text{£}$  rises, then the euro appreciates against the dollar, the yen depreciates against the pound and the dollar appreciates against the yen.

7. When the real exchange rate appreciates it cannot be that the nominal exchange rate depreciates.

8. The purchasing power parity exchange rate is the domestic inflation rate minus the foreign inflation rate, except if both inflation rates are equal, in which case the purchasing power parity exchange rate coincides with the nominal exchange rate.

9. The expenditure multiplier effect differs from the money multiplier only that in that in the former consumers only spend money whereas in the latter consumers only borrow money.

10. In the aggregate supply, aggregate demand model, a devaluation of the domestic currency is likely to cause a rise in the domestic inflation rate, since the devaluation improves the domestic competitiveness and that shifts the aggregate demand function to the right.

11. The savings identity holds that the real interest rate is approximately equal to the nominal interest rate minus the inflation rate.

12. The Laffer curve, Okun's law and the Phillips curve are all examples of economic policy rules followed by governments or central banks.

13. The main goals of supply-side policies and demand-side policies is to raise the inflation rate, lower unemployment, increase the government deficit and create a trade surplus.

14. The quantity equation is either a generalization of Taylor's rule or an example of Goodhart's law that involves financial assets that are risky, not very liquid but highly profitable.

15. The impossible trinity (or open economy trilemma) asserts that the fallacy of composition is a form of financial arbitrage that usually causes speculative attacks and forces central banks to sell the domestic currency in the currency market to prevent, under a fixed exchange rate regime, both triangular arbitrage and commercial arbitrage.

16. [3%] Explain your answer to question 6.	
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17. [10%] Define the following concepts.

Liquidity ratio	
Fallacy of composition	
T-bill	
Demand-side policy	

Taylor's rule	
Stagflation	
Business cycle	
Recession	
Fisher effect	
Discount factor	

**18. [8%]** The money multiplier is  $3/2$ . The reserve ratio plus one equal three times the liquidity ratio. Cash in the hands of the public is 100. If possible, find the money stock, reserves, the monetary base, the reserve ratio, deposits and the liquidity ratio. If not, explain why not.

**19. [9%]** The euro is the domestic currency. The dollar is the foreign currency. The domestic government deficit is  $-30$ . The current domestic CPI is 100. The domestic CPI in the previous period is 80. The current foreign CPI is 200. The current domestic real interest rate is 4%. The current foreign unemployment rate is 3%. The money stock in both countries is 300. The domestic current GDP deflator is 120. The current domestic real exchange rate is 4. Calculate: (i) net exports; (ii) the current domestic nominal interest rate; (iii) the current nominal exchange rate; (iv) the purchasing power parity exchange rate; (v) real GDP (if some value cannot be calculated, explain why).

**20. [3%]** Write down the savings identity. Calculate, if possible, the government deficit if savings equal investment, exports equal savings and imports equal investment.

**21. [4%]** In Spain, millions of working hours go unpaid. To address this problem, the Spanish government has recently issued a decree compelling employers to register the working hours of their employees. Discuss the effectiveness of this measure in the light of Goodhart's law.

22. [7%] As regards the cartoon on the right:

(i) why more liquidity is supposed to be the solution to a financial crisis?;

(ii) who is supposed to provide that liquidity and to whom?



<https://ariesofwar.files.wordpress.com/2011/01/more-liquidity.jpg>

23. [6%] Economies A and B have the same currency. Their liquidity markets are initially separated. The interest rate in A is higher than in B. Explain what is likely to happen to the interest rate, the supply of liquidity and the demand for liquidity in both A and B if the two liquidity markets fully integrate (financial flows between A and B are free and costless).

24. Consider the cartoon on the right. Explain the answer to questions (i) and (ii) with the help of a graphical representation of the AS-AD model.

(i) [6%] Does the first part of the cartoon suggest that imports raise or lower the domestic inflation rate?

(ii) [6%] Does the second part suggest that oil imports raise or lower the domestic inflation rate?



[http://1.bp.blogspot.com/\\_1V7wnZxPqok/Rd36qz9-Y2I/AAAAAAAAACBY/-cujbJeBQyo/s400/cartoon+china+3.jpg](http://1.bp.blogspot.com/_1V7wnZxPqok/Rd36qz9-Y2I/AAAAAAAAACBY/-cujbJeBQyo/s400/cartoon+china+3.jpg)

(iii) [3%] Explain how an expanding Chinese economy may affect oil prices.

25. [7%] Interpret the cartoon on the right. What is the suggested relationship between the real and the financial sector?

Fed = US central bank

“Main street is a colloquial term used to refer to individual investors, employees and the overall economy. Main Street is typically contrasted with Wall Street, with the latter referring to the financial markets, major financial institutions and big corporations, as well as the high-level employees, managers and executives of those firms.”

<https://www.investopedia.com/terms/m/mainstreet.asp>



[https://www.zerohedge.com/sites/default/files/images/user3303/imageroot/2013/11/20131117\\_itsallshit.jpg](https://www.zerohedge.com/sites/default/files/images/user3303/imageroot/2013/11/20131117_itsallshit.jpg)

26. Imagine that a technological war between China and the US sinks the value of Google (Alphabet) in the US stock market and that, as a consequence, the whole US stock market crashes.

(i) [6%] Explain (with the help of a graphical representation of the liquidity market model) the effect of the stock market crash on the interest rate.

(ii) [6%] Without taking into account the effect on the interest rate found in (i), explain (with the help of a graphical representation of the currency market model) whether effect of the stock market will cause an appreciation or a depreciation of the domestic currency.

(iv) [4%] Answer again (iii) if the effect on the interest rate found in (i) is taken into account.

(ii) [2%] Indicate two economic policy measures by the central bank that could neutralize that effect.