Introduction to Macroeconomics · Final exam · 2 June 2015

1. What sentence is not false?
(a) Okun's law does not refer to the nominal interest rate but the Phillips curve does refer.
(b) Taylor's rule does not involve the unemployment rate but the Phillips curve does.
(c) The GDP deflator establishes how aggregate production changes and, in particular, how GDP changes.
(d) None of the above

2. What is the likely, immediate effect on the macroeconomic equilibrium of implementing, simultaneously, a contractionary fiscal policy and a supply-side policy?
(a) The inflation rate goes up while GDP does not vary.
(b) The inflation rate could remain unchanged and GDP could diminish.
(c) The inflation rate is reduced but GDP could not remain constant.
(d) None of the above

3. In principle, what event could not explain a depreciation of the exchange rate $/€?
(a) An increase in the US interest rate
(b) A fall in the US GDP
(c) A rise in the eurozone inflation rate
(d) None of the above

4. The Fisher equation
(a) does not mention the interest rate or the inflation rate.
(b) involves the unemployment rate and the inflation rate.
(c) refers neither to GDP nor the exchange rate.
(d) None of the above

5. Observing, at the same time, a rise in the inflation rate and a fall in the nominal interest rate would contradict
(a) the basic rule of economic policy or Goodhart's law.
(b) purchasing power parity.
(c) the Fisher effect.
(d) None of the above

6. What sentence is not true?
(a) Neither the real exchange rate nor the interest rate are determined in the currency market.
(b) The liquidity market model is not useful to establish the value of the unemployment rate but it is to ascertain the effect of open market operations.
(c) Taylor's rule is an equation stating how a central bank would set the interest rate.
(d) The inflation rate and the unemployment rate are both determined in the aggregate supply and aggregate demand model.

7. An aggregate demand function can be assumed downward sloping because, if the inflation rate falls, then
(a) the purchasing power of money also falls and, accordingly, consumption pushes up.
(b) the exchange rate rises, competitiveness improves and, as a result, exports go up.
(c) the tax rate firms pay on their profits is automatically reduced and, consequently, investment increases.
(d) None of the above

8. Banks have decided to lend more money. What measure could neutralize the effect on the interest rate of the banks' decision to expand lending?
(a) A contractionary open market operation
(b) Cutting the interest rates set by the central bank
(c) Lowering the amount of legal (or minimum) reserves
(d) None of the above

9. In which case the aggregate demand function would for sure shift to the right but the inflation rate could decrease?
(a) A supply-side policy is implemented at the same time as 50% of all the firms close down.
(b) An expansionary monetary policy is implemented at the same time as a contractionary fiscal policy.
(c) An expansionary fiscal policy is implemented at the same time as a supply-side policy.
(d) None of the above

TABLE OF ANSWERS

No answer: no penalty · Incorrect answer: $-1/3$ of the value of a correct answer · Weight: 18%

1	2	3	4	5	6	7	8	9

DNI number ____________________ Surnames ____ Name ___________________________

IF MORE THAN TEN ORTHOGRAPHICAL OR GRAMMATICAL MISTAKES ARE MADE, THE TEACHER COULD CHOOSE TO EVALUATE THE EXAM AS 'NOT TAKEN'

1. [2%] Explain with the help of the quantity equation, or some transformation of that equation, if it is possible that the velocity of circulation of money does not change, nominal GDP grows by 2% and the money stock is reduced a 2%.	

2. [2%] Identify a real and a nominal macroeconomic variable that could take negative values (the names of the variables cannot include the words "nominal" and "real").	Nominal	Real

3. [3%] Explain for what the aggregate supply and aggregate demand model can be considered useful.	

4. [3%] Explain what an open market operation is, pick two macroeconomic variables affected by this kind of operation and indicate how they are affected.	

5. [3%] What is the purchasing power parity exchange rate? In which units is it measured? State the formula that defines the concept.	

6. [3%] (i) Write down the savings macroeconomic identity. (ii) If possible, find imports if (private) savings are 10, the trade balance is zero, consumption is 20, the government deficit is zero, the inflation rate is negative, the unemployment rate is 24%, exports equal government spending, and government spending equals (private) savings.	

7. [3%] Explain how monetary policy can influence the exchange rate.	

8. [2%] In the aggregate supply and aggregate demand model, identify an event that could simultaneously cause, in equilibrium, an increase in GDP and a decrease in the inflation rate.	

9. [2%] Indicate some feature that an expansionary monetary policy and an expansionary fiscal policy have in common and another one that differentiates them.	In common	Difference

10. [3%] Select two variables of the domestic economy that are affected by a rise in foreign income Y^* and explain how the change in Y^* affects them.	

11. [3%] Calculate the real interest rate between period $t = 0$ and period $t = 1$ if the CPI in $t = 0$ is 100, the CPI in $t = 1$ is 105, and the nominal interest rate between $t = 0$ and $t = 1$ is 3%.	

12. [2.5%] (i) Write down the formula of the real exchange rate. (ii) The eurozone CPI is 50. The US CPI is 100. Compute the nominal exchange rate between the euro and the dollar that makes the real exchange rate equal to four US baskets of goods per eurozone basket of goods. Specify the units of the exchange rate calculated.	

13. [4%] In the first week of May 2015 the Danish government announced that it was planning to allow gas stations, clothing stores, and restaurants the option to stop taking cash payments. Explain how this measure would affect the money multiplier process and the money multiplier itself. http://qz.com/399531/denmark-hopes-to-boost-its-economy-by-eliminating-cash/	

14. [2%] Explain whether an expansionary fiscal policy could generate some contractionary effect on the economy.	

15. [2.5%] If the GDP deflator has fallen by 2%, by how much should approximately vary real GDP in order to keep nominal GDP constant? Justify the answer using the corresponding formula.	

16. [2%] Select two fiscal policy tools and two monetary policy tools.	Fiscal	Monetary

17. [4%] Cash in the hands of the public is 100. Deposits amount to 600. With both deposits and the cash in the hands of the public remaining constant, the money multiplier has jumped from 2 to 4. If possible, find the change in the reserve ratio. [List in your calculations all the formulae you use.]	

18. [12%] There are many instances of bank runs in the US economic history: 1819, 1837, 1857, 1873, 1893, 1907… (i) Explain, with the help of the liquidity market model, the effect of a bank run on the interest rate [state clearly which function or functions shift and why]. (ii) Suggest two monetary policy measures that could offset the effect of the bank run on the interest rate and indicate the function or functions that each measure modifies.

19. [10%] Since 2013 negotiations are being conducted to establish a free trade agreement between the US and the European Union (the Transatlantic Trade and Investment Partnership). Using a graphical representation of the currency market model involving the euro and the dollar, and taking the dollar as the domestic currency, explain the effect on the exchange rate €/$ of the approval of a free trade agreement between the US and the European Union assuming that the lifting of commercial barriers is more beneficial to US consumers than to consumers from the European Union.
http://blogs.lse.ac.uk/europpblog/2013/02/28/eu-usa-free-trade-deal/

20. [14%] At the beginning of May 2015 the Danish Finance minister, Bjarne Corydon, made a proposal to eliminate cash payments from retailers and restaurants on the presumption that this will make easier to do business (by reducing costs) and will boost economic growth (by stimulating productivity). For instance, forcing companies to accept cash payments causes them substantial administrative and financial burdens; in addition, retailers have to spend resources on security guards and surveillance systems and also time to make change for customers. In a cashless economy, by comparison, transaction costs are smaller and crime presumed to go down.

http://qz.com/399531/denmark-hopes-to-boost-its-economy-by-eliminating-cash/
http://www.independent.co.uk/news/world/europe/denmark-moves-closer-to-a-cashless-society-10231995.html

Using the AS-AD model explain and analyze graphically the effect on the macroeconomic equilibrium of eliminating cash payments (for each function that shifts as a result of this measure, state why the function shifts).