Introduction to Macroeconomics · Final exam · 22 June 2015

1. Which sentence is true?
(a) The Phillips curve is Taylor's rule when the inflation rate equals the interest rate
(b) The GDP deflator establishes how aggregate production changes and, in particular, how GDP changes.
(c) Okun's law, in essence, relates GDP with the unemployment rate.
(d) The aggregate supply function establishes a positive relationship between interest rate and unemployment rate.

2. What is the likely, immediate effect on the macroeconomic equilibrium of implementing an expansionary fiscal policy and, simultaneously removing a previously applied supply-side policy?
(a) The inflation rate goes down while GDP does not change.
(b) GDP could remain unchanged but the inflation rate increases.
(c) GDP falls but it is not possible to ascertain whether the inflation rate moves up or down.
(d) None of the above

3. In principle, what event would for sure explain a fall in 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) mentions neither the interest rate nor the inflation rate.
(b) involves the unemployment rate and the inflation rate.
(c) does not relate GDP with 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 macroeconomic savings identity.
(b) purchasing power parity.
(c) the Fisher effect.
(d) None of the above

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

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

8. Banks have decided to lend less money. What measure could neutralize the effect on the interest rate of the banks' decision to contract lending?
(a) An expansionary open market operation
(b) The government issues T-bills
(c) The amount of legal (or minimum) reserves is increased
(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 fiscal policy is implemented at the same time as a supply-side policy.
(c) An expansionary monetary policy is implemented at the same time as a contractionary fiscal 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 what is the usefulness of the aggregate supply and aggregate demand model.	

4. [3%] Explain what an open market operation is, pick one macroeconomic variable affected by this kind of operation and indicate how it is affected.	

5. [3%] **(i)** What is the purchasing power parity exchange rate? **(ii)** State the formula that defines the concept and indicate its units of measurement.	

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. [3.5%] Explain how changes in the nominal interest rate affect the nominal exchange rate.	

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

9. [2%] Indicate some feature that a contractionary 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 90, 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. [3.5%] Suppose currency has an expiry date: coins and banknotes newly issued by the central bank are legal tender for just six months. Explain how this event is likely to affect the money multiplier.	

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 three 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%] **(i)** Suggest an event that could cause a decrease in the equilibrium interest rate. **(ii)** Explain how, and for what reason, the supply and demand function that determine the interest rate are affected by that event. **(iii)** Represent graphically, in the corresponding model, your analysis in parts (i) and (ii). **(iv)** Explain, and represent graphically in the appropriate model, the effect on the macroeconomic equilibrium of the event suggested in part (i).

19. [12%] **(i)** Suggest an event that would cause a depreciation of the dollar against the euro. **(ii)** Explain how, and for what reason, the supply of euros function and the demand for euros function are affected by that event. **(iii)** Show the effects described in parts (i) and (ii) in a graphical representation of the currency market model. **(iv)** Explain, and represent graphically in the appropriate model, the effect on the macroeconomic equilibrium of the event suggested in part (i).

20. [12%] **(i)** Using the AS-AD model explain and analyze graphically the effect on the macroeconomic equilibrium of an economy of the application in the rest of the world of an expansionary fiscal policy. **(ii)** Indicate a monetary policy measure that could neutralize the effect on the inflation rate found in part (i). **(iii)** What effect would the measure suggested in part (ii) on the macroeconomic equilibrium of the rest of the world?