



1. An increase in real PIB necessarily implies
  - (a) an increase in nominal GDP.
  - (b) a fall in the GDP deflator.
  - (c) a disinflation.
  - (d) None of the above
2. What could explain a reduction in the \$/€exchange rate?
  - (a) A fall in the US interest rate
  - (b) A raise in the US inflation rate
  - (c) Neither (a), nor (b), nor (d)
  - (d) A raise in the eurozone interest rate
3. Which sentence is not false?
  - (a) The GDP deflator is never equal to the CPI.
  - (b) If the GDP deflator goes up, then the CPI goes down.
  - (c) It is not true that monetary policy affects aggregate demand and fiscal policy only affects aggregate supply.
  - (d) When the government budget deficit rises, the trade balance is in a surplus and also rises.
4. Which sentence is not true?
  - (a) Denmark is not a eurozone member.
  - (b) A nominal variable is obtained from a real variable real by subtracting the inflation rate from the real variable.
  - (c) The monetary base is a monetary aggregate.
  - (d) The inflation rate can be smaller than the interest rate.
5. The Phillips curve and Okun's law both refer to the
  - (a) unemployment rate.
  - (b) interest rate.
  - (c) exchange rate.
  - (d) inflation rate.
6. Which variable appears both in the quantity equation expressed with rates of change and the Fisher equation?
  - (a) The GDP rate of growth
  - (b) The interest rate
  - (c) The rate of growth of the money stock M1
  - (d) None of the above
7. (1) The unemployment rate is defined as either employment/unemployment or unemployment/employment. (2) The CPI is the amount of money used to establish the market production. (3) Open market operations occur when there are import or exports. (4) Deflation = nominal GDP / real.
  - (a) Only two sentences are false.
  - (b) At least three sentences are false.
  - (c) Some sentence is not false.
  - (d) Only one sentence is false.
8. In which units is the real exchange rate expressed?
  - (a) Current euros or in the same units as the CPI
  - (b) Current dollars per euros of a base year
  - (c) The real exchange rate does not have any units.
  - (d) None of the above
9. Which variable measures an economy's competitiveness?
  - (a) The real exchange rate
  - (b) The money velocity of circulation
  - (c) The unemployment rate minus the inflation rate
  - (d) The real interest rate
10. Taylor's rule
  - (a) is an example of discretionary fiscal policy.
  - (b) is a supply-side policy measure.
  - (c) is an analytical tool to represent the monetary policy decisions taken by a central bank.
  - (d) None of the above
11. If net private savings  $S - I$  equal zero and imports equal exports, then
  - (a) there is a budget surplus (public savings are positive).
  - (b) there is a budget deficit (public savings are negative).
  - (c) the economy suffers from a financial need.
  - (d) None of the above
12. What intervention by the Federal Reserve in the currency market would tend to appreciate the dollar against the euro?
  - (a) The purchase of dollars and the sale of euros
  - (b) The sale of dollars and the purchase of euros
  - (c) An expansionary monetary policy
  - (d) None of the above
13. According to the loan market model, what could not in general explain an increase in the interest rate?
  - (a) A contractionary open market operation
  - (b) A lowering of the reserve ratio
  - (c) An increase in the government budget deficit
  - (d) The bankruptcy of a significant number of banks
14. It is characteristic of the expansionary phase of the business cycle that
  - (a) GDP (real or nominal) grows.
  - (b) the unemployment rate grows.
  - (c) the quantity equation and the Laffer curve become false.
  - (d) the crowding-out effect becomes null and the trade balance is zero.
15. According to the aggregate supply and aggregate demand (AS-AD) model, what could neutralize stagflation?
  - (a) An expansionary fiscal policy
  - (b) An contractionary monetary policy
  - (c) A supply-side policy
  - (d) None of the above
16. According to the AS-AD model, what could not likely lead to a fall in the inflation rate?
  - (a) A cut in the taxes paid by consumers when they purchase goods.
  - (b) A revaluation, in a fixed exchange rate regime.
  - (c) The adoption of supply-side policy measures
  - (d) A contractionary monetary policy
17. Pick a monetary policy tool of the European Central Bank.
  - (a) The Euribor
  - (b) Taylor's rule
  - (c) The deposit facility
  - (d) None of the above
18. What is likely to shift the aggregate supply function to the right and the aggregate demand function to the left?
  - (a) Supply-side policy plus expansionary monetary policy
  - (b) Closing down of firms plus expansionary fiscal policy
  - (c) Closing down of firms plus stock market crash
  - (d) Supply-side policy plus stock market crash

No answer: no penalization · Incorrect answer: -1/3 of the value of a correct answer · Weight of Part 1: 36%

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

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

1. [15%] Define briefly the following concepts.

Real GDP

Macroeconomic equilibrium

Fisher effect

Expansionary open market operation

GDP deflator

The neutrality of money principle

Okun's law or Goodhart's law

Expansionary fiscal policy

Real exchange rate or real interest rate

Monetary base

2. [6%] Justify the answer given to multiple choice question 16 from Part 1 and explain why the discarded options are incorrect.

3. (i) [8%] The government decrees that even days are no longer working days, so workers are forbidden to be at work any such day and firms are legally obliged to close factories and facilities every such day. Using the aggregate supply and aggregate demand model, determine graphically the effect of that measure on the macroeconomic equilibrium when a whole year is considered and explain the changes in the aggregate functions that cause the effect determined.

[5%] (ii) Assuming that the economy is big enough, how would that measure affect the macroeconomic equilibrium, the aggregate supply function, and the aggregate demand function of the rest of the world? Explain your answer.

4. [10%] The US and the eurozone are autarkic economies. The US price level is  $P^* = 200$ , whereas the eurozone price level is  $P = 100$  (both computed adopting the same basket of goods). The governments of the two economies agree to open them and initially set the exchange rate at  $e = 1$  \$/€. Assuming that the conditions under which purchasing power parity theory holds, and using the AS-AD and the currency market models, explain the changes that are likely to occur in  $P^*$ ,  $P$ , and  $e$ .

5. [3%] Establish, in a well-reasoned way, the value of the exchange rate in the currency market if the purchasing power parity exchange rate is 2 \$/€, the eurozone price level is  $P = 100$ , and the US price level is  $P^* = 200$ .

6. [3%] Using the version of the quantity equation expressed in rates of change, calculate the inflation rate if the velocity of circulation of money remains constant, real GDP increases by 2%, and the money stock increases by 5%.

7. [5%] With  $M1 = 1000$ ,  $M0 = 500$ , reserve ratio equal to  $3/8$ , and deposits  $D = 800$ , find the liquidity ratio  $l$  and the currency  $E$  held by the public.

8. [2%] Find the approximate value of the inflation rate if real GDP has increased by 4% and nominal GDP has decreased by 2%.

9. [3%] Using the fundamental macroeconomic accounting identities, find net exports if  $S = 90$ ,  $G = 40$ ,  $TR = 10$ , and  $T = 30$ .

10. [5%] Explain a common feature and two differences between an expansionary monetary policy and an expansionary fiscal policy.

11. [5%] Explain the exchange rate monetary policy transmission channel.