

**1. Simpson's paradox**

- (a) says that the Laffer curve is a particular case of Okun's law.
- (b) holds that the fallacy of composition becomes the *post hoc ergo propter hoc* fallacy when the Tinkerbelle effect shifts the aggregate demand function to the right.
- (c) refers to the possibility that something true for different groups may become false for the union of the groups.
- (d) None of the above

**2. What sentence is not true?**

- (a) Goodhart's law sets certain limitations or restrictions to what economic policy can achieve.
- (b) The Dunning-Kruger effect may have some relevance to economic policy because, according to the effect, policy-makers might believe that they are more capable of controlling an economy than they actually are.
- (c) According to the *cum hoc ergo propter hoc* fallacy, the reverse Tinkerbelle effect is simply a Ponzi scheme created by sheer speculation.
- (d) The Peter principle could justify the idea that policy-makers are not competent enough to do the policy-making job.

**3. The trolley problem**

- (a) asserts that, when the 80/20 rule is applicable, prisoner's dilemma is transformed into the open economy trilemma.
- (b) illustrates the fact that, in some cases, making economic policy decisions could imply choosing between two evils.
- (c) states that Rodrik's trilemma makes spatial arbitrage difficult to implement.
- (d) None of the above

**4. In which case does some of the first two variables not intervene in the definition of the third variable?**

- (a) Real GDP, nominal GDP, GDP deflator
- (b) Population, interest rate of the rest of the world, real GDP per capita
- (c) domestic CPI, foreign CPI, real exchange rate
- (d) domestic CPI, foreign CPI, purchasing power parity exchange rate

**5. Which sentence is not false?**

- (a) Deflation is the phenomenon opposite to disinflation.
- (b) By definition, reflation occurs when the unemployment rate rises.
- (c) During the expansionary phase of the business cycle Moravec's paradox makes the Phillips curve an increasing function and makes the supply of euros (in exchange for dollars) a decreasing function.
- (d) Say's law justifies the belief that unemployment vanishes automatically.

**6. Triangular arbitrage**

- (a) does not mean that involuntary unemployment is always a problem of insufficient demand or of powerful trade unions.
- (b) holds that involuntary unemployment is caused by high wages.
- (c) affirms that one euro always has the same purchasing power.
- (d) None of the above

**7. What claim about financial assets is not false?**

- (a) The efficiency wage is the least liquid financial asset.
- (b) Financial arbitrage explains the existence, under certain conditions, of an inverse relationship between the price of a financial asset and the nominal interest rate.
- (c) The more profitable and the less risky a financial asset, necessarily the more liquid the asset must be.
- (d) The volume of financial assets purchased by the private sector is, according to the savings identity, approximately equal to 80% of the government budget deficit.

**8. A macroeconomic equilibrium refers to**

- (a) the unemployment rate and the inflation rate.
- (b) the GDP deflator and the exchange rate.
- (c) the interest rate and the inflation rate.
- (d) None of the above

**9. In the aggregate supply and aggregate demand model,**

- (a) a shift in the aggregate demand function could lower the inflation rate.
- (b) no shift in the aggregate supply function could lower GDP.
- (c) the euro could appreciate against the dollar if the demand for liquidity function shifts to the left.
- (d) None of the above

**10. According to the expenditure multiplier effect,**

- (a) having more loans creates a higher trade deficit, which increases the public debt, which generates more loans.
- (b) more expenditure creates more income, which creates more consumption, which creates more expenditure.
- (c) monetary aggregate **M1** multiplies itself into **M0** and **M0** multiplies itself into electronic money, which multiplies itself into **M1**.
- (d) None of the above

**11. Some of the standard functions attributed to money are**

- (a) the reserve ratio, bank money, the monetary base, and, occasionally, some bank run.
- (b) open market operations, reserves requirements, and the standing facilities.
- (c) being unit of account, medium of exchange, and store of value.
- (d) None of the above

**12. What claim on the nominal interest rate is not true?**

- (a) It can be used to calculate the discount factor.
- (b) It is a variable appearing in Taylor's rule.
- (c) In the liquidity market model, it necessarily diminishes when the central bank conducts a contractionary open market operation.
- (d) It is present in the Fisher equation.

**13. The euro does not tend to depreciate against the dollar if**

- (a) the US GDP grows.
- (b) the eurozone GDP increases.
- (c) the eurozone inflation rate goes up.
- (d) the US interest rate rises or none of the above.

**14. In the liquidity market model, the interest rate**

- (a) falls if the government issues T-bills massively.
- (b) goes up if the central bank sells financial assets.
- (c) remains constant no matter what the central bank does.
- (d) None of the above

**15. In the aggregate supply and aggregate demand model, as the more immediate effect,**

- (a) a contractionary demand-side policy increases GDP.
- (b) a supply-side policy always lowers GDP.
- (c) an expansionary demand-side policy tends to push up the inflation rate.
- (d) a combination of a supply-side policy and a demand-side policy never reduces GDP.

**16. In which case does the first variable take, in general, a higher value than the second variable?**

- (a) Money multiplier, unemployment rate (in per one terms)
- (b) Real interest rate, real exchange rate
- (c) Rate of change of nominal GDP, inflation rate
- (d) None of the above

**17. In a fixed exchange rate regime**

- (a) revaluation is impossible but devaluation is possible.
- (b) the real exchange rate is one.
- (c) commercial arbitrage ensures that the purchasing power parity exchange rate equals the foreign interest rate minus domestic interest rate.
- (d) None of the above

← Final mark you believe you deserve

**ANNOTATE BELOW THE ANSWERS TO THE MULTIPLE CHOICE QUESTIONS**

No answer: +0 · Incorrect answer: -1/3 of the value of a correct answer · Weight: 34%

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

DNI Number \_\_\_\_\_ Surname(s) \_\_\_\_\_ Name \_\_\_\_\_

1. [2%] List all the current members of the eurozone.	
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2. [1,5%] Describe briefly the Fisher effect.	
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3. [1,5%] What is an open market operation?	
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4. [2%] What is a bank run?	
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5. [2%] What is a currency crisis?	
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6. [2%] What is a financial asset?	
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7. [2%] What is the impossible trinity?	
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8. [2,5%] The velocity of circulation of money is 5. The rate of growth of the money stock is zero. Using the quantity equation, find nominal GDP and the growth rate of nominal GDP.	
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9. [2%] Indicate something that the nominal interest rate and the nominal exchange rate have in common and something that differentiates them.	In common	Difference
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10. [1,5%] List three macroeconomic variables that could take negative values.			
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11. [3%] Identify two fiscal policy tools, two monetary policy tools and two supply-side policies.	FP	MP	Supply-side
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<p><b>12. [1,5%]</b> Write down three macroeconomic variables that could not take negative values.</p>			
<p><b>13. [2%]</b> What is triangular arbitrage?</p>			
<p><b>14. [2%]</b> What is the (bank) money creation process?</p>			
<p><b>15. [8,5%]</b> Calculate the money multiplier, the reserve ratio, the liquidity ratio, <b>M1</b>, the monetary base, and deposits if the amount of cash in the hands of the public doubles the reserves and deposits are twice the cash in the hands of the public.</p>			
<p><b>16. [4%]</b> Write down the formula of the real exchange rate taking the euro as the home currency, the dollar as the foreign currency, and quoting the nominal exchange rate indirectly. Identify each variable in the formula and indicate its units. Find the real exchange rate if, taking the euro as the home currency and quoting the exchange rate indirectly, the nominal exchange rate is 1/2, the domestic CPI is 300 and the foreign CPI is 50. Calculate the real exchange rate now taking the dollar as the home currency and quoting the nominal exchange rate in indirect terms.</p>			
<p><b>17. [3%]</b> Write down the quantity equation and identify each variable appearing in the equation. How does this equation justify the claim that an increase in the money growth rate causes a rise in the inflation rate?</p>			
<p><b>18. [3,5%]</b> According to the relative purchasing power parity, what is approximately the rate of change of the exchange rate \$/€ if the eurozone inflation rate is -2% and the US inflation rate is 2%? Interpret the result.</p>			
<p><b>19. [3,5%]</b> Write down the formula linking the price of T-bills and the interest rate. Using this formula, calculate the discount factor if the nominal (or face) value of a T-bill doubles its price. Interpret the result.</p>			

<p><b>20. [3%]</b> There is country A and the rest of the world, B. Find the change in B's real interest rate if (i) the change in the inflation rate is the same in A and B, (ii) in A the nominal interest rate has increased by 4 percent points, (iii) in A the real interest rate has decreased by 5 percent points, and (iv) in B the nominal interest rate has fallen by 2 percent points.</p>	
<p><b>21.</b> There are two economies, A and B. In A the central bank conducts an expansionary open market operation (OMO).</p> <p>(i) <b>[5%]</b> Analyze graphically by means of the liquidity market model how the OMO would affect the interest rate in A.</p> <p>(ii) <b>[5%]</b> Analyze graphically by means of the currency market model how the change in the interest rate found in (i) would affect the exchange rate between the currencies of A and B.</p> <p>(iii) <b>[5%]</b> Analyze graphically by means of the liquidity market model how the OMO from A would affect the interest rate in B.</p>	<p>(iv) <b>[5%]</b> Analyze graphically by means of the aggregate supply and aggregate demand model how the OMO would affect both the inflation rate and the GDP of economy A.</p> <p>(v) <b>[5%]</b> Analyze graphically by means of the aggregate supply and aggregate demand model how the changes found in (iv) would affect both the inflation rate and the GDP of economy B.</p> <p>(vi) <b>[4%]</b> Suggest a fiscal policy measure by the government of B that could neutralize the change in B's GDP found out in (v). What impact would that measure generate on A's GDP?</p>
<p><b>22. [3%]</b> The CPI inflation is twice the GDP deflator inflation rate. If real GDP has grown by 2%, by how much has nominal GDP changed approximately?</p>	

<p><b>23. [2%]</b> Suggest two events making the money creation process end up creating less money than the amount created without the events taking place.</p>		
<p><b>24. [2%]</b> The International Centre for Settlement of Investment Disputes (ICSID) is an international arbitration institution of the World Bank. The award of case ARB/13/36, rendered on the 4th of May, 2017, has ordered the Kingdom of Spain to pay €128 million, plus interests, in compensation for having reduced the subsidies promised to investors in renewable sources of energy. What limitation of the implementation of economic policies does this situation illustrate? Justify your answer.</p>		
<p><b>25. [7%]</b> Analyze graphically by means of the currency market model the impact on the exchange rate of the announcement by the government that all foreign firms settled in the country are going to be expropriated and nationalized. Justify your analysis.</p>		
<p><b>26. [7%]</b> The central bank announces that in a few months the bank will raise the interest rate sharply. Analyze graphically by means of the AS-AD model how the announcement is likely to alter the macroeconomic equilibrium. Justify your analysis.</p>		
<p><b>27. [3%]</b> Suppose you are the Minister of Economic Affairs of a country with a 25% unemployment rate. What would your first economic policy measure be to try to lower that figure? Justify the adoption of this measure. Is it a demand-side policy? A supply-side policy? Another type of policy?</p>		
<p><b>28. [3%]</b> There are only two countries, A and B. Explain if A's competitiveness improves when the nominal exchange rate goes up, A's CPI goes down, and B's CPI increases. Explain what happens to B's competitiveness under the same circumstances.</p>		
<p><b>29. [4,5%]</b> Savings equal taxes plus imports. Transfers equal public expenditure plus two. Investment equals transfers minus exports. Imports are three times public expenditure minus two. Find taxes.</p>		
<p><b>30. [3%]</b> Under exchange rates <math>x</math> <math>\\$/\pounds</math>, <math>y</math> <math>\pounds/\pounds</math> and <math>2</math> <math>\\$/\pounds</math> triangular arbitrage is not possible. Explain if <math>x</math> is greater than, smaller than, or equal to <math>y</math>.</p>		
<p><b>31. [3%]</b> If domestic CPI is twice foreign CPI, is the real exchange rate larger than, smaller than, or equal to the nominal exchange rate? Calculate the purchasing power parity exchange rate.</p>		