

1ST SURNAME

2ND SURNAME

NAME

ID NUMBER

1. [1.5 points] Explain briefly the meaning of the following concepts.

**Consumer price index**

**Monetary base (or M0)**

**Relationship between net private saving, government budget, and trade balance (or net exports)**

**Public deficit monetization**

**Real interest rate**

**Quantity equation**

**2. [1 point]** The government wonders whether to finance an unexpected public deficit by increasing taxes or by issuing T-bills. (a) Using the loan market model, show graphically the effect of each option on the interest rate.

(b) For each option, explain the kind of monetary policy that the central bank should carry out to neutralize the effect on the interest rate established in (a).

**3. [1 point]** (a) Calculate the nominal exchange rate (in \$/€ units) and the purchasing power parity exchange rate if the real exchange rate is  $e_r = 2$  US baskets/eurozone basket, the US CPI is  $P^* = 200$ , and the eurozone CPI is  $P = 300$ .

(b) Given the results from (a), explain if the euro is overvalued or undervalued with respect to its purchasing power parity value and compute by how much (in percentage terms).

**4. [1 point]** Find out how each of the following events is likely to alter the macroeconomic equilibrium in an AS-AD model of the eurozone. Indicate in each case if the event is a policy measure and, if so, whether it is expansionary or contractionary. [Write “↑” if there is an increase; “↓” if a reduction; “=” if there is no change; “→” if there is a shift to the right; “←” if it is to the left ; and “?” if the effect is uncertain.]

Event	AS function	AD function	$\pi$	$Y$	Policy (monetary, fiscal, supply, no policy)	E = expansionary C = contractionary
One million Chinese workers arrive in the eurozone						
The euro appreciates with respect to the dollar						
The European Central Bank buys T-bills						
The eurozone stock market crashes						
The eurozone firms improve their competitiveness						

**5. [1.5 points]** Explain, and represent graphically, how the exchange rate  $\$/\text{€}$  would be affected by (a) an increase in the eurozone real GDP.

(b) a speculative attack against the euro.

(c) a decline in the US interest rate.