ECONOMIC POLICY AND BUSINESS ACTIVITY – Academic Year 2013-2014
Final Written Exam – 9th June 2014

The answers to the questions indicated below must be given without the recourse of any kind of taught materials. Twenty five questions are proposed. For each question there is only one correct answer. This must be identified with the symbol X inside the corresponding square. The choice of more than one answer is not permitted and will imply that the answer is not given. In case of error, please correct the answer by writing: "the right answer is … ". The right answer will have a positive score of 0.8. The wrong answer will have a negative penalty of 0.25.
The duration of the exam is 90 minutes.

In appropriate spaces identified below please fill them in with your name and corresponding number of student.

QUESTIONS WITH MULTIPLE CHOICES

1. Indicate the case where independent agencies should not take economic policy decisions:
- ☐ a) Social preferences are stable and performance criteria are well defined.
- ☐ b) Decisions are not immune to time inconsistency.
- ☐ c) Decisions involve trade-offs between incompatible objectives.
- ☐ d) Decisions have significant impacts on the income distribution between generations.

2. The Rawls social utility function implies:
- ☐ a) Maximization of the individual utility of the poorest.
- ☐ b) Maximization of aggregate utility of all individuals.
- ☐ c) Equalization of utility for all individuals.
- ☐ d) Maximization of utility of average income individual.

3. Indicate in which case economists who sustain the natural theory of monopoly do not make use of this in the formulation of the economic policy:
- ☐ a) To advocate subsidies to firms that are thought as natural monopolies.
- ☐ b) To fix product prices of firms that are thought as natural monopolies.
- ☐ c) To advocate the nationalization of firms that are thought as natural monopolies.
- ☐ d) None of the above answers.

4. Indicate the answer below that do not constitute parts of the arguments of economists who deny the theory of natural monopoly and its use for the formulation of economic policy:
- ☐ a) The theory was formulated in order to justify the governments' actions to hamper the entry of competitors in some sectors and thus to benefit firms' monopolies.
- ☐ b) Non acceptance of the idea of decreasing average cost.
- ☐ c) It is the market and not the government that has to determine the number of firms in sectors.
- ☐ d) The impediments of government to firms' entry in sectors with monopolies were historically observed before the formulation of the natural monopoly theory.

5. The Tinbergen rule states that:
- ☐ a) The number of instruments must be equal to the number of objectives.
- ☐ b) The number of instruments must be lower than the number of objectives.
- ☐ c) For each objective there must exist one instrument.
- ☐ d) The number of instruments must be equal or higher than the number of objectives.

***Name of student*:** ____ **№** ________

6. Since the end of the World War II the rates of inflation in the OECD countries were higher in the following period:

- ☐ a) 2008/2012.
- ☐ b) 1961/1972.
- ☐ c) 1982/1991.
- ☐ d) 1973/1981.

7. The condition for the stability of the ratio of debt to GDP is as follows:

- ☐ a) d = (n – i) b
- ☐ b) b = (n – i) d
- ☐ c) n = d +i b
- ☐ d) n =d – i b

(d = primary deficit in % of GDP; n = nominal growth rate of GDP; i = nominal interest rate; b=debt in % of GDP)

8. Specify the rule of the European Union Budget Treaty which was established on 1/1/2013:

- ☐ a) Maximum value of structural deficit equal to 0.25 of GDP.
- ☐ b) Penalty of 0.1% of GDP to infringing countries.
- ☐ c) Annual reduction of the excess of the public debt ratio during 25 years at the value of: (actual ratio-60%)/20.
- ☐ d) Annual reduction of the excess of the public debt ratio during 25 years at the value of: (actual ratio-60%)/25.

9. Identify the item which do not satisfy the transversality conditions for the sustainability of the public debt:

- ☐ a) If *r* is higher than *g*, then it is necessary and sufficient that the debt ratio increases at a value lower than *r-g*.
- ☐ b) *n = r.*
- ☐ c) The present value of the future primary surpluses is equal to or higher than the initial level of debt.
- ☐ d) None of the above answers.

(r=real interest rate; n= nominal growth rate of GDP; g=real growth rate of GDP)

10. Look at Table 2 where is included the Portuguese position. The decrease of the weight of the value of interests from sovereign debt in GDP in the period 1995-2005 is a result of:

- ☐ a) Decrease of interests that more than compensated the increase of the weight of government debt in GDP.
- ☐ b) Decrease of the weight of government debt in GDP strengthened by the decrease of interests.
- ☐ c) Decrease of the weight of government debt in GDP that more than compensated the increase in interests.
- ☐ d) Decrease of the weight of government debt in GDP and stability of interests.

11. Look again at Table 2 where is included the Portuguese position. The increase of the weight of the value of interests from sovereign debt in GDP in the period 2005-2012 is a result of:

- ☐ a) Increase of interests that more than compensated the decrease of the weight of government debt in GDP.
- ☐ b) Increase of the weight of government debt in GDP strengthened by the increase of interests.
- ☐ c) Increase of the weight of government debt in GDP that more than compensated the decrease in interests.
- ☐ d) Increase of the weight of government debt in GDP and stability of interests.

12. Indicate the situation which is not suitable to evaluate the independence of central banks:

- ☐ a) Limitation of loan concession to government by the central bank.
- ☐ b) Selection by law of objectives which have to be pursued by the central bank.
- ☐ c) Appointment of the central bank board by a commission of members of the parliament.
- ☐ d) Limitation of the government capacity to dismiss the members of the central bank board.

13. The value of seigniorage earned by central banks when the golden rule of capital accumulation is satisfied is equal to:

- ☐ a) i Δ M0. (i=nominal interest rate)
- ☐ b) i GDP.
- ☐ c) i M0.
- ☐ d) Δ M0.

14. In a given day it is known the values of the following interest rates: EONIA; 1 month EURIBOR; 3 months EURIBOR; and the permanent marginal lending facility established by ECB. Indicate the plausible rate for the 3 months EURIBOR:

- ☐ a) 0,22%.
- ☐ b) 0,24%.
- ☐ c) 0,33%.
- ☐ d) 0,75%.

15. The Taylor rule aims at illustrating:
- ☐ a) The nominal interest rate that should be practiced by the central bank.
- ☐ b) The optimal inflation rate that the central should define as an objective.
- ☐ c) The maximum of unemployment rate that the government should select as an objective.
- ☐ d) The real growth rate of GDP that the government should define as an objective.

16. Defined by law, the distinction between the objectives of ECB and FED is as follows:
- ☐ a) Contrary to that of FED, the ECB mission is the price stability.
- ☐ b) Contrary to that of FED, the ECB mission is not the employment stability.
- ☐ c) Contrary to that of FED, the ECB mission is the exchange-rate stability.
- ☐ d) Contrary to that of FED, the ECB mission is not to lend money to member states.

17. Look at Figure 2 where the indicator shown designates the total asset of ECB. It is an approximate measure of:
- ☐ a) Loan supply of commercial banks to firms.
- ☐ b) Volume of M3 created.
- ☐ c) Volume of M0 created.
- ☐ d) Volume of M2 created.

18. Look again at Figure 2. The decrease that is illustrated of the asset value of ECB after 2012 is a result of:
- ☐ a) Devolution to ECB by commercial banks of loans supplied before by the former to the latter.
- ☐ b) Decrease of loans supplied by commercial banks to companies.
- ☐ c) Decrease of purchases of public debt.
- ☐ d) Reduction of public debt interests.

19. Generally the interest rate charged by ECB for the main refinancing operations:
- ☐ a) Is higher than the permanent marginal lending facility.
- ☐ b) Is lower than the permanent marginal deposit facility.
- ☐ c) Is lower than the permanent marginal lending facility.
- ☐ d) Is equal to permanent marginal lending facility.

20. The golden rule of capital accumulation is:
- ☐ a) $r > n + g$.
- ☐ b) $r= n + g$.
- ☐ c) $\alpha =r$.
- ☐ d) $\alpha > r$.

(r=real interest rate; n= population growth rate; g=growth rate of TFP; α=% share of capital in GDP)

21. Consider the Solow model of growth with a Cobb-Douglas production function. If the share of capital in GDP (α) is 50%, then an increase of 10% in the savings rate implies an increase of GDP per capita equal to:
- ☐ a) 1%.
- ☐ b) 10%.
- ☐ c) 5%.
- ☐ d) 2%.

22. Consider the Solow model with total factor productivity constant over the time. The equation of the long-run equilibrium (steady-state) is:
- ☐ a) $\sigma = (n+\delta)$.
- ☐ b) $y = (n+\sigma)$.
- ☐ c) $\sigma y = (n+\delta)k$.
- ☐ d) $y = nk$.

(σ = savings rate; n = population growth rate; δ = depreciation rate; y = GDP per capita; k = physical capital per capita)

23. For the countries and periods considered, Figure 1 shows:
- ☐ a) Beta convergence.
- ☐ b) Solow's residual.
- ☐ c) Labour productivity.
- ☐ d) Ratio of capital to labour.

Name of student: ____ ***№*** _________

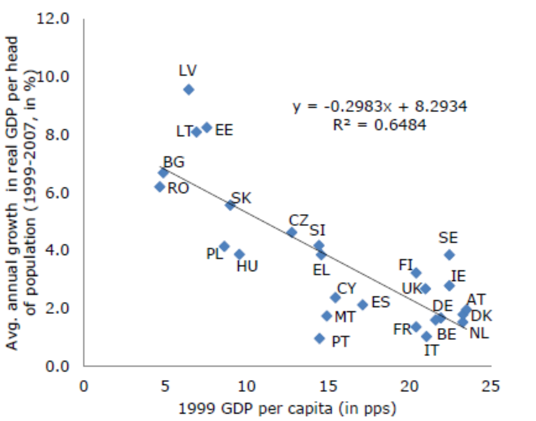
24. Look at Table 1. The value of X is:

- ☐ a) 0.4%.
- ☐ b) 1.0%.
- ☐ c) -1.0%.
- ☐ d) 0.8%.

25. Look again at Table 1. The value of Z is:

- ☐ a) 0.4%.
- ☐ b) 1.7%.
- ☐ c) -1.7%.
- ☐ d) 0.8%.

Graph I.1: **GDP per capita in level and GDP growth, EU countries**



Source: AMECO.

Fig. 1: GDP per capita in 1999 and GDP per capita growth rate in 1999-2007

Table 1: Growth accounting in the EU (average annual growth rates in % in 2000-04)

GDP	1.5
Total hours worked	X
Employment	0.7
Working hours per person	-0.3
Labour productivity	Y
Contribution of capital/labour ratio	0.7
Total factor productivity	Z

Fig. 2: Total of asset of ECB – millions of euros

	1995	2005	2012
Belgium	8.9	4.3	3.5
Denmark	5.9	2.1	1.8
Germany	3.5	2.8	2.4
Ireland	5.2	1.1	3.6
Greece	12.6	4.7	5.0
Spain	5.1	1.8	3.0
Italy	11.5	4.7	5.4
Holland	5.6	2.4	1.8
Portugal	5.6	2.5	4.3

Table 2: Weight of public debt interests in GDP (%)