# **EI06 - An Introduction to Macro-Economics**

Département des Humanités

Autumn 2012

## Mid-Term Exam

No documents, computers, nor cellular phones are allowed. Duration 2 hours

#### Question 1 (4 points):

Please answer clearly and briefly to the following questions:

- 1. What is measured by the Marginal Rate of Substitution? (1 point)
- 2. How does the Neo-classical consumer choice theory represent consumer tastes, which conditions should be realised ? (1 point)
- 3. What differentiates a branch from a sector (1 point)
- 4. Define the marginal productivity of a production factor ? (1 point)

### Question 2 (6 points):

Use the data available below to answer the following questions. Each answer should be justified by calculation and/or elements from the course.

| Year | Taxes | Consumption | Investment | Government Spendings | Exports | Imports | Labour<br>Productivity |
|------|-------|-------------|------------|----------------------|---------|---------|------------------------|
| 2010 | 700   | 8000        | 2200       | 510                  | 845     | 855     | 1,98                   |
| 2011 | 500   | 8080        | 2020       | 500                  | 850     | 850     | 2                      |

- 1. Compute the Disposable Income (or Real Available Income) of households in 2010 and 2011 ? (0.5 points)
- 2. Define and compute the Average Propensity to Consume for 2011. (0.5 points)
- 3. Recall Keynes' Fundamental Psychology Law. Is this law verified here? (1 point)
- 4. Define and compute the Marginal Propensity to Consume for 2011. (1 point)
- 5. Define and compute the Keynesian multiplier. (1 point)
- 6. Assume that Firm's investment drop of 100 in the course of the year. Using the multiplier, compute to effect on GDP. Deduce the drop in employment. (1 point)



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7. Assume that to compensate this drop in investment, the government increase its spending of 150. Using the answer to the previous question compute the effect on GDP of this policy. How many jobs got saved. (1 point)

#### Question 3 (6 points):

Use the data available below to answer the following questions. Each answer should be justified using elements from the course.

|                   | Country A        |                | Country B        |                |  |
|-------------------|------------------|----------------|------------------|----------------|--|
|                   | GDP Growth Rates | Interest Rates | GDP Growth Rates | Interest Rates |  |
| 2012              | 0.020            | 5,00%          | 0.015            | 5,00%          |  |
| 2013 (previsions) | 0.030            | 7,00%          | 0.030            | 4,00%          |  |

- 1. You are representing a machine-tool firm producing robots for the automotive sector. To which component of the effective demand of these countries is the demand addressed to your company contributing to ? (0.5 points)
- 2. Using the macro-economic information above and elements from the, you have to advise the board of direction of the company on the country among those two to implement a new production line. (2.5 points)
- 3. A drop in the demand for cars induced by a fall in the demand for robots for the automotive sector. This fall led to an excess supply on this market. Using your knowledge of market mechanisms, is the current market price higher or lower than the new market equilibrium price consecutive to the drop in demand? (1 point)
- 4. Using your knowledge of market mechanisms, explain the process through which the domestic market for robots for the automotive sector returns to an equilibrium (1 point)
- 5. Recall the five assumptions for perfect competition, allowing this market mechanisms to work properly (1 point)

#### Question 4 (4 points):

Comment the following table:

|                               | 2010-T1 | 2010-T2 | 2010-T3 | 2010-T4 | 2011-T1 | 2011-T2 |
|-------------------------------|---------|---------|---------|---------|---------|---------|
| Gross Domestic Product        | 477,5   | 481,3   | 485,2   | 487,4   | 494,6   | 496,6   |
| Imports                       | 126     | 132,6   | 137,7   | 139,1   | 148,5   | 147,1   |
| Consumption Spendings         | 397,3   | 399,1   | 402,1   | 405,1   | 409,1   | 409,1   |
| Gross Fixed Capital Formation | 91,3    | 93,1    | 94      | 94,6    | 96,9    | 97,9    |
| Stocks                        | -2,1    | 0,2     | 1,5     | 0       | 5,9     | 5       |
| Exports                       | 116,9   | 121,6   | 125,3   | 126,8   | 131,3   | 131     |

Billion Euros,

Source: INSEE

