

Attention: Not all questionnaires are the same. This is questionnaire **A**. On the answer sheet, you must indicate the letter of your questionnaire with the course's number as follows: **ECO2143A**. You must answer according to **the material seen in this course**. Read all answer choices before choosing your answer. GOOD LUCK!

QUESTIONNAIRE A

I. MULTIPLE CHOICE QUESTIONS (3 points each)

1. Which of the following is most likely TRUE.
 - (a) There is firm evidence that a fiscal stimulus can take an economy out of a recession.
 - (b) In 1933, stock market prices collapsed in the six months after president Roosevelt took office because he wanted to reduce inflation.
 - (c) If the government suddenly announces a large increase in its expenditures to be made twelve months from now, businesses may react by increasing their investments within the coming six months.
 - (d) Business investment did not react to the Canadian stimulus package announced in January 2009 because it was already well anticipated before December 2008.

2. Which of the following is TRUE?
 - (a) According to the Malthusian model of population and economic growth, a technological improvement leads to higher standards of living in the long run.
 - (b) The Malthusian model of population and economic growth is useful to explain increases in standards of living in the industrialized world over the last 200 years.
 - (c) A drop in the mortality rate can lead to lower fertility through the effect of increased incentives to invest in a child's education.
 - (d) A drop in the mortality rate can only lead to higher population growth in the long run.
 - (e) Better access to contraceptives is the leading explanation for lower population growth in today's developed world.

3. Suppose that a country experiences a large reduction in its capital stock, say due to the effect of a military conflict that has just ended. Assume no other effect from this event on the economy. Within the context of the basic Solow model without technological growth, which of the following will occur as the economy adjusts to this situation (all in per capita terms)?
 - (a) Zero growth for some time, followed by a gradually increasing growth rate.
 - (b) High growth for some time, followed by slow but sustainable growth in the long run.
 - (c) Low growth for some time, followed by slow but sustainable growth in the long run.
 - (d) Some growth for some time, followed by zero growth in the long run.
 - (e) Positive growth, followed by negative growth, and then zero growth.

4. Below is a list of market failures that call for direct government intervention in the economy (somewhat uncontroversially). Which one is NOT really meant to make markets more efficient?
 - (a) Public good provision
 - (b) Externalities
 - (c) Monopolies
 - (d) Coordination
 - (e) Income distribution

5. Which of the following is clearly FALSE?
- (a) During the 1950s and 1960s, increased government intervention was predominantly considered suspect, in part due to the low growth experience of the Soviet Union during the 1920s and 30s.
 - (b) During the 1950s and 1960s, increased government intervention was predominantly considered desirable, in part due to the fact that the 1930's depression was seen as large market failure.
 - (c) During the 1980s and 1990s, increased government intervention was predominantly considered suspect, in part due to the low growth experience of the socialist economies from the 1960s on.
 - (d) During the 1980s and 1990s, an important wave of privatization of state enterprises has swept across most of the world economies.
6. Assume a world economy composed of only two countries, countries A and B, and two types of goods being produced, goods 1 and 2. Labor-hour is the only type of input and each country is endowed with the same total amount of labor-hours and population size. Country A requires 3 hours to produce each unit of good 1 and 9 hours for each unit of good 2. Country B requires 1 hour to produce each unit of good 1 and 3 hours for each unit of good 2. Which of the following is FALSE.
- (a) In country A, the opportunity cost of good 2 is 3 units of good 1.
 - (b) In country B, the opportunity cost of good 2 is 3 units of good 1.
 - (c) In autarky, country B is richer than country A.
 - (d) With trade, country B is richer than country A.
 - (e) Both countries can be made strictly better off by trading at a price of 3 units of good 1 per unit of good 2.
7. Take the world economy of question 6 with the following sole modification: due to a technological improvement, Country A now requires 1 hour to produce one unit of good 1. Which of the following is generally TRUE?
- (a) Trade makes country A richer than country B.
 - (b) Both countries can gain by trading at a price of 3 units of good 1 per unit of good 2.
 - (c) Both countries can gain by trading at a price of 6 units of good 1 per unit of good 2.
 - (d) Both countries can gain by trading at a price of 10 units of good 1 per unit of good 2.
 - (e) When country A becomes more productive, its resulting higher competitiveness will necessarily make country B poorer under trade.
8. According to the data that we have studied in the course, which of the following can be said about economic growth and trade openness.
- (a) Poor economies tend to grow faster when they are closed.
 - (b) There does not seem to be any link between the degree of trade openness and the speed of convergence of poor economies with the rich world.
 - (c) Trade openness seems to be a necessary prerequisite for the convergence of poor economies with the rich world.
 - (d) It is difficult to find examples of countries that began to grow faster after opening up their economy to the rest of the world.
 - (e) There are many examples of countries that became rich while being virtually closed to trade with the rest of the world.

9. Suppose that the yearly returns to education are the following: 13.4% for grades 1 to 4, 10.1% for grades 5 to 8, and 6.8% beyond 8 years. What fraction of wages is due to human capital for a worker who has nine years of education?
- (a) 25.5%
 - (b) 40.5%
 - (c) 50.5%
 - (d) 61.5%
 - (e) None of the above is anywhere close to the real value.

10. Suppose that there are only two goods produced in the world: corn and restaurant meals. Corn is traded on world markets but not restaurant meals. The following table provides information about output quantities and prices for countries *MEX* and *CAN*.

Country	corn output per capita	rest. meal output per capita	price corn local currency	price rest. meal local currency
CAN	8	2	2	9
MEX	4	1	1	2

What should we expect the market exchange rate between pesos of country *MEX* and dollars (\$) of country *CAN* to be (assume no-arbitrage possibilities)?

- (a) 1\$/peso
 - (b) 2\$/peso
 - (c) 3\$/peso
 - (d) 4\$/peso
 - (e) 5\$/peso
11. (Question (10) continued.) What should the purchasing power parity adjusted exchange rate be?
- (a) 2\$/peso
 - (b) 2.833\$/peso
 - (c) 3\$/peso
 - (d) 3.167\$/peso
 - (e) 3.75\$/peso

II. PROBLEMS

1. (40 points) Capital mobility and economic growth

Assume that the output per capita of a country is given by $y = Ak^\alpha$. (Note that this implies that the marginal product of capital is equal to $\alpha Ak^{\alpha-1}$.)

- a) **(10)** Assume that the country is CLOSED to the rest of the world such that its capital is NOT mobile. Assuming a savings rate of γ and a capital depreciation rate of δ , derive the long-run output per capita. How does it depend on the savings rate? (To be solved with equations. No graphic.)
- b) **(10)** Assume now that capital is perfectly mobile with the rest of the world. State clearly and briefly what the law of one price for capital movements says. Show that the equilibrium stock of capital is independent of the country's savings rate. (To be solved with equations. No graphic.) Explain intuitively.
- c) **(5)** Does your answer to (b) imply that countries that save more are no better off than countries that save nothing when capital is perfectly mobile? Explain.

We have seen that the current account balance of an open economy was given by the following identity:

$$(1) \quad B_{t+1}^f - B_t^f = rB_t^f + NX_t,$$

where B_t^f denotes net foreign asset holdings, r is the rate of interest on assets, and NX_t is net exports.

- d) **(5)** Explain intuitively in words what identity (1) means.
- e) **(10)** Is it always better to have a positive current account balance? Answer from the perspective of Canada's experience over the past 50 years or so.

2. (27 points) Population growth and economic growth

Consider the Solow model with population growth, as studied in class. Assume that population can grow at two different rates: n_1 and n_2 , where $n_1 > n_2$. The population growth rate depends on the level of output per capita (and therefore the level of capital per capita). Specifically, population grows at (high) rate n_1 when $k < \bar{k}$ and at (low) rate n_2 when $k \geq \bar{k}$. We assume that $(n_1 + \delta)\bar{k} > \gamma f(\bar{k})$ and $(n_2 + \delta)\bar{k} < \gamma f(\bar{k})$.

- a) **(15)** Using a graphical analysis, explain why this model leads to bleak predictions regarding the problem of high population growth in poor countries.
- b) **(12)** Why do poorer countries tend to have higher population growth? Is better access to contraceptives likely to solve the problem?