

**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 (4 points each)

1. The Solow model does a pretty good job at explaining
  - (a) growth in the long run for industrialized countries.
  - (b) why physical capital cannot explain differences in income levels between countries.
  - (c) the role of protection of property rights in explaining South Korea's high economic growth in the 1960's.
  - (d) the link between democracy and economic growth.
  - (e) the high growth rates that China has experienced over the past 20 years or so.
2. Between 1950 and 1980, the rate of growth of output per capita was highest in which of the following countries?
  - (a) USA
  - (b) UK
  - (c) Japan
  - (d) Canada
  - (e) Haiti
3. Over the past 130 years, the average yearly growth rate of income per capita in Canada and the USA has been approximately (give the closest value)
  - (a) -1%
  - (b) 0%
  - (c) 2%
  - (d) 5%
  - (e) 8%
4. Assume that the GDP/capita for the country of Coronado in 1900 was \$5,000. By 2000, the GDP/capita of this country was \$75,000. Using the average growth rate of income per capita over this period, what is the projected GDP/capita of Coronado in 2025?
  - (a) \$147,600/capita
  - (b) \$123,456/capita
  - (c) \$110,237/capita

- (d) \$175,789/capita
- (e) According to the Mayan calendar, the end of the world will occur in 2012. Proper scientific reasoning should incorporate that fact to predict zero income in 2025.
5. Suppose a country's output level is represented by a Cobb-Douglas production function per worker  $y = k^\alpha$  where  $\alpha = 1/3$ . Moreover, the depreciation and investment rates are respectively  $\delta = 10\%$  and  $\gamma = 15\%$ . Also assume that capital per worker at period 0 is  $k_0 = 12$ . What is the percent change in the per-capita income level between period 0 and period 1?
- (a) Increases by 1.21%
- (b) Increases by 2.44%
- (c) Remains unchanged
- (d) Decreases by 1.21%
- (e) Decreases by 2.44%
6. Income per capita in a country is given by  $y = k^\alpha$ , where  $k$  is capital per capita and  $\alpha$  is a parameter with value  $1/3$ . In country A, the depreciation and investment rates are respectively  $\delta_A = 10\%$  and  $\gamma_A = 5\%$  while in country B, we have  $\delta_B = 5\%$  and  $\gamma_B = 10\%$ . According to the Solow model, what is the long-run ratio of per-capita incomes  $y_A^{ss}/y_B^{ss}$ ?
- (a)  $\sqrt{0.5}$
- (b) 0.5
- (c)  $2^{\frac{1}{3}}$
- (d)  $\sqrt{2}$
- (e) 1
7. Which of the following statements regarding savings rates in the Solow model (where the investment rate equals the savings rate) is **true**?
- (a) An increase in the savings rate leads to a higher long-run growth of income.
- (b) A higher savings rate leads to higher output per capita in the long-run which necessarily leads to higher levels of consumption.
- (c) An increase in the savings rate lowers the short-run income growth rate.
- (d) A change in the savings rate has no impact on the long-run level of GDP/capita.
- (e) An decrease in the savings rate may increase the long-run consumption level.
8. Muhamar and Margaret are the only two citizens living in country A. Nicolas and Angela are the only two citizens in country B. Their respective PPP adjusted incomes in years 1980 and 2000 are given by the following table:

Person	Country	1980	2000
Muhamar	A	3000	30 000
Margaret	A	6000	60 000
Nicolas	B	1000	3000
Angela	B	2000	6000

Suppose that income inequality between all the citizens of the world is measured by the ratio of the average income of the richest 50% to the average income of the poorest 50%, regardless

of the country where they live. The numbers in the above table indicate that between 1980 and 2000,

- (a) world inequalities have increased mainly because of an increase in inequalities between countries.
  - (b) world inequalities have increased mainly because of an increase in inequalities within countries.
  - (c) world inequalities have decreased mainly because of a decrease in inequalities between countries.
  - (d) world inequalities have decreased mainly because of a decrease in inequalities within countries.
  - (e) world inequalities have remained the same.
9. Suppose that there are only three goods produced in the world: (pairs of) warm boots, hockey games and beaver tails.<sup>1</sup> Warm boots are traded on world markets but not hockey games and beaver tails. The following table provides information about aggregate output quantities and unit prices for countries  $A$  and  $B$ . (Prices and quantities for boots refer to pairs.)

Country	boots output total (million)	hockey games output total (million)	beaver tails output total (million)	price boots (local currency)	price hockey game (local currency)	price beaver tail (local currency)
A	4	8	2	3\$A	4\$A	2\$A
B	2	5	3	2\$B	1\$B	1\$B

An international statistical agency has estimated that a typical consumption basket in both countries is composed of 1 pair of warm boots, 5 hockey games and 2 beaver tails. Determine the PPP exchange rate between the two currencies.

- (a) 0.333\$A/\$B
  - (b) 1\$A/\$B
  - (c) 1.5\$A/\$B
  - (d) 2\$A/\$B
  - (e) 3\$A/\$B
10. In question 9, let  $(Y_A/Y_B)_{EX}$  denote the GDP ratios between countries  $A$  and  $B$  using the market exchange rate and  $(Y_A/Y_B)_{PPP}$  be the GDP ratio using the PPP exchange rate. By what percentage will the GDP ratio  $[(Y_A/Y_B)_{EX} - (Y_A/Y_B)_{PPP}] / (Y_A/Y_B)_{PPP}$  between country  $A$  and country  $B$  be mis-estimated if one uses the market exchange rate instead of the PPP exchange rate?
- (a) Underestimated by 50%.
  - (b) There is no difference.
  - (c) Overestimated by 100%.
  - (d) The GDP cannot be calculated without data on income levels.

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<sup>1</sup>A beaver tail is a delicacy sold at your corner frozen canal. Warm boots make the frozen canal more enjoyable. A hockey game is a sport derived from an accidental cross-pollination between soccer and boxing.





