Final. Spring 2019

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Economics of Development

Each question is worth the total number of points in parentheses; sub-questions are allocated an equal share of the total points per question. Final is worth 30 points.

1) Inequality. (3 points)

a) Draw a Lorenz curve for the distribution of income in a country. Be sure to label the axes.

1. Draw another Lorenz curve that has a more unequal distribution than the one in (a).
2. Describe how to compute the Gini coefficient for each of these two Lorenz curves, and argue whether the coefficient in (b) will be greater than (a) or vice versa.
3. What is meant by the statement that the Gini coefficient meets the principle of scale independence?

2) True or False (3 points)

|  |  |
| --- | --- |
| Statement | Circle whether the statement is true or false |
| “Bread and Circuses” is a theory that in order to stay in power, unstable governments provide benefits to urban dwellers to keep them content, thus bringing about further urban migration. | True False |
| Drug trafficking and prostitution are considered part of the informal sector in the developing world. | True False |
| At the primary school level, girls’ enrollment rate has been decreasing over the past ten years for developing countries. | True False |
| Capital intense agricultural innovations are suited to the resource profile of most developing nations. | True False |
| Psacharopoulos reported the private internal rate of return to primary education in Sub Saharan African countries was lower than a standard discount rate of 10%. | True False |
| The current annual world population growth rate is faster now than it has ever been in recorded human history. | True False |
| Current estimates of global population are in the 14-15 billion range. | True False |
| The Total Fertility Rate (TFR) records the annual number of births per 1000 females in the total population of a country. | True False |
| The United States is currently the largest donor of official development assistance of any country in the world. | True False |
| The United States currently allocates 11.5% of federal budget expenditures to official development assistance. | True False |
| The Poverty Reduction Strategy adopted by the World Bank is one of the components Williamson identifies as part of what he first called the ‘Washington Consensus’. | True False |
| Migration models based on expected income provide an explanation for why rural to urban migration persists in spite of existing urban unemployment. | True False |
| Urban giantism describes the phenomena that the largest city in developing countries tends to hold the largest share of the national population who suffer from overnutrition. | True False |
| The evidence from the WHO presented in class reported that malnutrition is a contributing factor to over half the deaths of children under five in developing countries. | True False |
| The upper arm circumference of adults does not change much from age 15-65, making it a good measure of current adult undernutrition. | True False |

3) Population issues (3 points)

a) Fill in the following table. Fr stands for the total fertility rate of the associated age cohort during their reproductive years. Assume future youth cohorts will have a total fertility rate of 2. Total population is for males and females; assume 50% of the population and future births are female. The number in each cell of the table in rows a,b, and c should describe the number of females in each cohort in a given generation.

Country A

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Generation 1 | Generation 2 | Generation 3 | Generation 4 |
| a.Pre-reproductive cohort, Fr=2 |  |  |  |  |
| b. Reproductive cohort , Fr=2 |  |  |  |  |
| c.Post reproductive cohort, Fr=2 | 30 |  |  |  |
| *Female Population* | *90* |  |  |  |
| *Total population* | *180* |  |  |  |

Country B

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Generation 1 | Generation 2 | Generation 3 | Generation 4 |
| a.Pre-reproductive cohort, Fr=2 |  |  |  |  |
| b.Reproductive cohort , Fr=3 |  |  |  |  |
| c.Post reproductive cohort, Fr=4 | 15 |  |  |  |
| *Female Population* | *90* |  |  |  |
| *Total population* | *180* |  |  |  |

Describe how your findings on total population by the fourth generation illustrate the concept of **the hidden momentum of population growth**.

4) Poverty measures. (3 points)

|  |  |
| --- | --- |
| Person number | Income per day |
| 1 | $0.05 |
| 2 | $0.20 |
| 3 | $0.90 |
| 4 | $1.40 |
| 5 | $1.95 |
| 6 | $2.55 |
| 7 | $2.75 |
| 8 | $3.25 |
| 9 | $4.45 |
| 10 | $14.55 |

TOTAL INCOME $32.00

a) What is the total poverty gap, the average poverty gap, the average income shortfall, and the normalized average income shortfall if the poverty line is defined as $1.90 per person per day?

TPG=

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

APG=

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AIS=

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NAIS=

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) If we start from the income figures in the table and then take $0.10 from person 5 and give it to person 4, does this change the headcount index and if so by how much?

If we start with the income figures in the table and then take $0.55 from person 3 and give it to person 4, does this change the headcount index and if so by how much?

c) What share of total income is held by the highest quintile and what share is held by the lowest quintile in the income table?

Highest=

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lowest=

5) Debating points (3 points)

a) Provide two arguments why increasing girls’ education is a benefit for a developing country.

b) Provide two arguments why the existence of an informal sector is helpful for the economy of a developing country.

c. Identify two ways in which land reform and redistribution could increase economic growth.

6) Health (3 points).

a) Contrast the idea behind a disability adjusted life year as a measure of health in contrast to using mortality rates.

1. Explain how government expenditures on health based on DALY evidence of health priorities might differ from health expenditures priorities that are based on mortality rates..

7) Education (3 points)

a)True or False

|  |  |
| --- | --- |
|  | Circle whether the statement is true or false |
| The ‘missing women mystery’ investigates whey there are so few females in tertiary education compared to males in developed countries. | True False |
| Achieving universal secondary education was one of the Millennium Development Goals. | True False |
| The primary school female to male enrollment ratio is currently less than 10 girls to 100 boys in low income countries. | True False |
| The “educational Kuznets curve” describes how educational quality first increases as enrollment increases before decreasing after reaching a critical threshold. | True False |
| The primary school enrollment ratio has declined from 1970 to now overall in developing countries due to population growing more rapidly than spaces in classrooms have been provided. | True False |
| Educational outcomes are one of the components of the Human Development Index. | True False |

b) Explain and illustrate the benefit cost graph presented in class that outlines the decision to go to work following completion of primary school compared to the decision to go to secondary school and then enter the work force.

8) Agriculture. (3 points)

a) Describe the three main types of agrarian systems found in the developing world and note in which geographic region each one is most commonly found.

b) Chose one of these agrarian systems. Provide an example of an agricultural technology and/ or policy that might contribute to improved productivity in this agrarian system.

9) Population issues 2. (3 points)

a) Draw a figure illustrating the demographic transition and note the different stages.

b) Explain why the one rate you drew in (a) decreases before the other.

c) What is meant by ‘the replacement rate’, what kind of rate is it, and what is the usual value associated with a replacement rate?

d) Describe in general terms the approach taken to analyzing population growth using models of the demand for children.

10) Environment and Development. (3 points)

a. What is adjusted net savings / genuine savings?

b. How is this different from the s we used in the Solow growth model?

1. What is the conceptual difference between weak sustainability and strong sustainability?

Extra Credit (get them all, get 1 bonus point).

Fun with Acronyms: Write out what the acronym stands for

|  |  |
| --- | --- |
| PRSP |  |
| ODA |  |
| ICOR |  |
| CToT |  |
| IBRD |  |