Final. Spring 2014
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.

b) Draw another Lorenz curve that has a more unequal distribution than the one in (a).

c) 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.

d) 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
The majority of people in the developing world live in rural areas.	True False
The majority of people in the developing world's labor force are employed in agriculture.	True False
The majority of GNP in the developing world comes from the agricultural sector.	True False
The share of natural capital in total wealth is higher for low income countries than it is for high income countries according to the World Bank's 'Where is the Wealth of Nations?'	True False
Psacharopoulos reported the private internal rate of return to primary education in Latin American and Caribbean countries was lower than a standard discount rate of 10%.	True False
The 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 12-13 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 the largest donor of official development assistance of any country in the world.	True False
The United States allocates around 3% of GNI 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
Estimates of the size of the informal sector include the value of all illegal goods and services transacted in the country.	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 is 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	$0.15
3	$0.40
4	$0.90
5	$0.95
6	$2.55
7	$2.75
8	$3.25
9	$4.45
10	$14.55
TOTAL INCOME	$30.00

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 $1.25 per person per day?

TPG=

_____

APG=

_____

AIS=

_____

NAIS=

_____

b) If we start from the income figures in the table and then take $0.32 from person 5 and give it to person 4, does this reduce the headcount index and if so by how much?

If we start with the income figures in the table and then take $0.32 from person 4 and give it to person 5, does this reduce 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 a ban on child labor in a developing country is potentially counterproductive if our goal is to improve the well being of child laborers in that developing country.

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

c. Identify two ways in which educating girls in a developing country can contribute to realizing other important goals of that country's development strategy.

6) Health (3 points).

a) Explain the idea behind a disability adjusted life year.

b) Explain the argument that finding adult wage and height are positively correlated in some developing countries may reflect an underlying childhood health problem.

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 primary education in developing countries.	True False
Achieving universal secondary education is one of the Millennium Development Goals.	True False
The female to male enrollment ratio is currently less than 50 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
A country's educational attainment is included as a component of the Human Development index for that country.	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 two reasons why a land reform program 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.

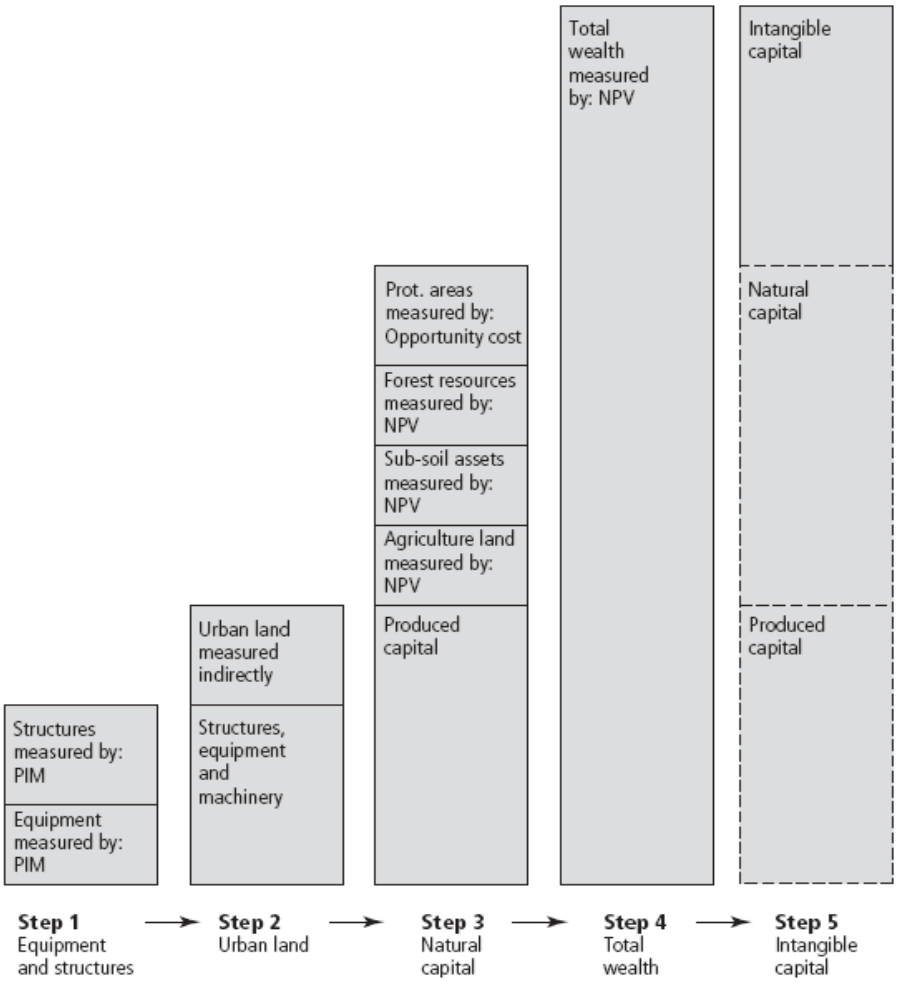
b) Explain why the one rate you drew in (a) decreases before the other.

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)

Figure 2.1 Estimating the Components of Wealth



a. What is this figure illustrating?

b. How is the estimate of step four done?

c. How do we interpret a negative value for intangible capital?

d. Overall for the world, is the highest share of wealth found to be produced capital, natural capital, or intangible capital?

e. Match the literature to the statement

A (Literature)	Write number of A that matches B here	B (Statement)
1. Common Property Management		The present value optimal outcome of growth models that incorporate environmental stocks as a form of capital are 'grim for far-distant generations'.
2. Environmental Kuznets curve		As each user only takes into account the private costs associated with their decision rather than the full costs to all users, each individual acting in their own self interest leads us to a sub-optimal outcome in terms of total social welfare.
3. Sustainable development		Environmental harm will first increase as income per capita increases before reaching a threshold, after which the environmental harm will begin to be reversed.
4. Environment and Vulnerability.		Technology improvement in agriculture can be 'land sparing' and poverty reducing.
5. Poverty-environment nexus.		The true savings rate in a country after accounting for investments in human capital, depreciation of produced assets, and the depletion and degradation of the environment.
6. Adjusted net savings		Economic development can suffer setbacks from environmentally driven asset shocks.

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

Fun with Acronyms: Write out what the acronym stands for

PRSP	
OECD	
IFPRI	
LICUS	
NRM	