Final.   Spring 2018
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) 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) What is the implication of the inverse relation between farm size and productivity for a
program designed to redistribute land from largeholders to smallholders?

2) Poverty measures. (3 points)

a) What is the formula for the Foster Greer Thorbecke (FGT) Poverty Index? Provide the formula and define all variables used in the formula.

b) What different FGT poverty measures correspond to alpha values of 0,1, and 2?

c) What does each of these measures tell you about the nature of poverty in a country?

3) Demographic Transition. (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) decreased before the other rate decreased.

c) Explain why there is concern that a country could get stuck in stage 2 of the transition.

4) 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 equal 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.

5) True or False (3 points)

Statement	Circle whether the statement is true or false
Income deciles order households by income from lowest to highest and report the income share held by 5 equal size groups of the population.	True False
Population estimates indicate that in the past few years, for the first time in recorded history, rural population is less than 50% of total world population.	True False
The current world population growth rate is the highest ever experienced in human history.	True False
"Where Is the Wealth of Nations" reports wealthier countries have a larger share of wealth accounted for as natural capital compared to poorer countries.	True False
A Total Fertility Rate is the difference between the crude birth rate and the crude death rate.	True False
The value of all remittances from the US to developing countries is included in the OECD measure of official development assistance (ODA).	True False
Estimates of current global population are in the 7.5 billion people range.	True False
Dietary assessment is a method to investigate undernutrition.	True False
The United States is the largest donor of official development assistance of any country in the world in terms of total ODA.	True False
Per capita food production is increasing by around 1% per year overall for the world.	True False
The Gini index measures the amount of total income that would be needed to bring all households below the poverty line up to the poverty line as a share of total income.	True False
The informal sector is the unorganized, unregulated, and unregistered sector of the economy	True False
Urban giantism describes the phenomena that as populations urbanize, over nutrition replaces undernutrition as the main type of malnutrition.	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 Millennium Development Goals are defined as goals to be met by 2030 for a set of indicators.	True False

6) Hidden momentum of population growth (3 points)
a) Fill in the following tables. Fr stands for the total fertility rate of the associated age cohort during their reproductive years. Assume all future youth cohorts will have a total fertility rate of 2 in their reproductive years. 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=3	1500			
Female Population	*6000*			
Total population	*12000*			

Country B

	Generation 1	Generation 2	Generation 3	Generation 4
a.Pre-reproductive cohort, Fr=2				
b.Reproductive cohort , Fr=5.3333				
c.Post reproductive cohort, Fr=6	500			
Female Population	*6000*			
Total population	*12000*			

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

b) What is meant by a 'bottom heavy' population pyramid and how does that relate to what you found in part a?

7) Poverty measures. (3 points)

Person number	Income per day
1	$0.06
2	$0.36
3	$0.52
4	$0.85
5	$1.98
6	$2.26
7	$3.15
8	$3.98
9	$7.52
10	$14.32
TOTAL INCOME	$35.00

a) What is the headcount, the headcount index, 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?

H=

_____

HI=

_____

TPG=

_____

APG=

_____

AIS=

_____

NAIS=

_____

b) If we take $1.00 from person 5 and give it to person 1, is there any change to the headcount index? Is there any change in the total poverty gap?

c) What share of total income is held by the highest quintile and what share is held by the lowest quintile (before the redistribution of part b – go to the figures in the table above to calculate)?

Highest=

_____

Lowest=

8) Migration Models (3 points)
a) Describe the Harris-Todaro model of migration.

b) Explain how this model relies on the concept of expected wages.

c) Identify two policy implications of the model for a government which desires to reduce urban unemployment rates.

9) Urbanization. (3 points)

a) Distinguish between agglomeration economies, urbanization economies, and localization economies as ways to explain urbanization.

b) Describe how the concepts of knowledge spillovers, forward linkages, and backward linkages relate to one of the three concepts noted in part a.

c) Briefly describe the findings of the study "Bread and Circuses" as it relates to urbanization.

10) Financial Tradeoffs in Decision to Continue Schooling or Enter the Work Force.(3 points)
  a. Draw a graph with $ on the y axis and years / age on the x-axis that illustrates the flow of costs and benefits over time. The graph should illustrate the decision of a primary school finisher to:
  i) enter the work force immediately after finishing primary school and earn the lifetime income profile for a primary school leaver or;
  ii) go to secondary school and enter the work force after finishing secondary school and earn the lifetime income profile of a secondary school leaver.

  b. Did the findings reported in Psacharopoulos, (1994) "Returns to Investment in Education: A Global Update." (also in the book and the ones presented in class) indicate that presented with this choice, completing secondary school was a good use of social resources in Sub-Saharan Africa and Asia?

  c. How did Psacharopoulos define the difference between the social rate of return compared to the private rate of return in this model of educational choice?

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

Fun with Acronyms: Write out what the acronym stands for

DALY	
SDR	
LICUS	
MUAC	
SDG	