Each question is worth three points; sub-questions are allocated an equal share of the total points per question. Total exam is 30 points.

1) Agriculture.

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

b) What is the implication of the inverse relation between farm size and productivity for a program designed to redistribute land from large land holdings to smallholders?

2) Kuznets curves.
a) Draw the original Kuznets curve and label everything clearly.

b) Explain the logic behind the shape of this curve.

c) Explain how the curve Kuznets drew using the data available at the time illustrates the danger of using cross sectional data to support a theory about how conditions in a country will change over time.

3) Demographic Transition.
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.
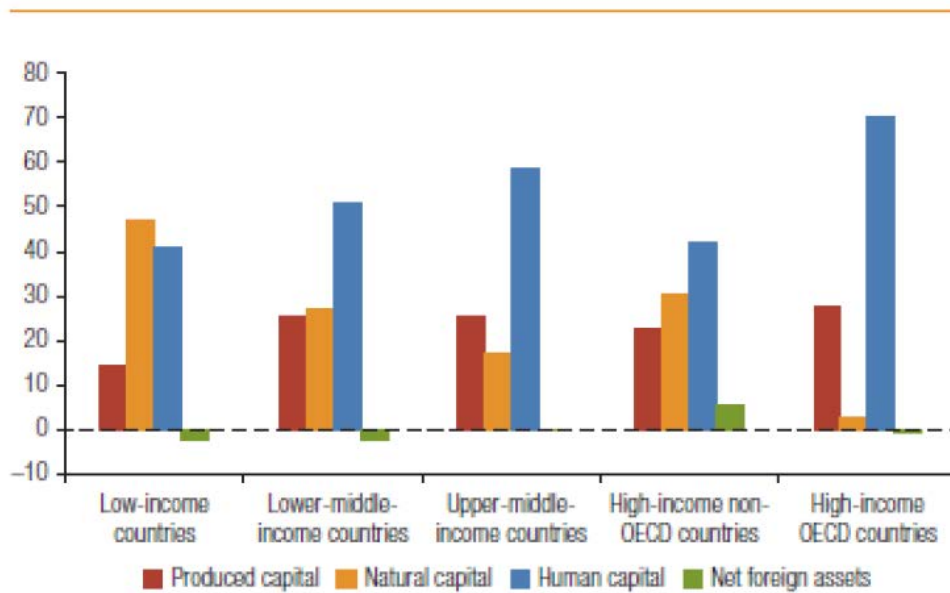
4) Inequality.
a) Draw a Lorenz curve for the distribution of income in a country. Be sure to label the axes.

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.

5) Wealth Accounting by the World Bank.

FIGURE 2.2 Composition of Wealth, by Income Group, 2014
percent

Source: World Bank calculations.
Note: OECD = Organisation for Economic Co-operation and Development.

a) Briefly explain the methods used to develop these estimates.

b) Briefly explain what these estimates indicate are the main differences between the wealth of high-income OECD countries and low-income countries.

6) True or False

Statement	Circle whether the statement is true or false
There is a positive correlation between income per capita and the share of the population that lives in urban areas in cross sectional comparison of countries.	True False
The majority of people in the developing world's labor force are engaged in the manufacturing sector.	True False
The world population growth rate over the past decade is the highest ever experienced in human history.	True False
A Disability Adjusted Life Year is calculated as the sum of the Years of Life Lost (YLL) due to premature mortality in the population and the Years Lost due to Disability (YLD) for incident cases of the health condition.	True False
Estimates of illegal narcotic transactions are included in calculating the size of the informal sector.	True False
The value of all remittances sent from OECD countries to developing countries is included in the OECD measure of official development assistance (ODA).	True False
Estimates of current global population are in the 21-21.2 billion people range.	True False
Dietary assessment is a method to investigate undernutrition.	True False
The United States is the largest donor of ODA of any country in the world in terms of ODA as a share of Gross National Income.	True False
Per Capita food production is increasing by around 1% per year overall for the world.	True False
The Foster Greer Thorbecke (FGT) index measures poverty according to three key depravations; of life, of basic education, and of overall economic provisioning.	True False
Dumping is international price discrimination in which an exporting firm sells at a lower price in a foreign market than it sells for in its home country market. The idea is to use this to eliminate foreign competitors, later rising prices after the competition is gone.	True False

7) Hidden momentum of population growth
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	3200	3200	3200	3200
b. Reproductive cohort , Fr=2	3200	3200	3200	3200
c.Post reproductive cohort, Fr=4	1600	3200	3200	3200
Female Population	*8000*	*9600*	*9600*	*9600*
Total population	*16000*	*19200*	*19200*	*19200*

Country B

	Generation 1	Generation 2	Generation 3	Generation 4
a.Pre-reproductive cohort, Fr=2	4800	4800	4800	4800
b.Reproductive cohort , Fr=4	2400	4800	4800	4800
c.Post reproductive cohort, Fr=6	800	2400	4800	4800
Female Population	*8000*	*12000*	*14400*	*14400*
Total population	*16000*	*24000*	*28800*	*28800*

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

8) Poverty measures.

Person number	Income per day
1	$0.06
2	$0.36
3	$0.52
4	$0.84
5	$0.90
6	$1.24
7	$2.26
8	$3.98
9	$4.72
10	$5.12
TOTAL INCOME	$20.00

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 $1.90 per person per day?

H=

_____

HI=

_____

TPG=

_____

APG=

_____

AIS=

_____

NAIS=

_____

b) If we take $1.00 from person 7 and give it to person 6, 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 table above to calculate)?
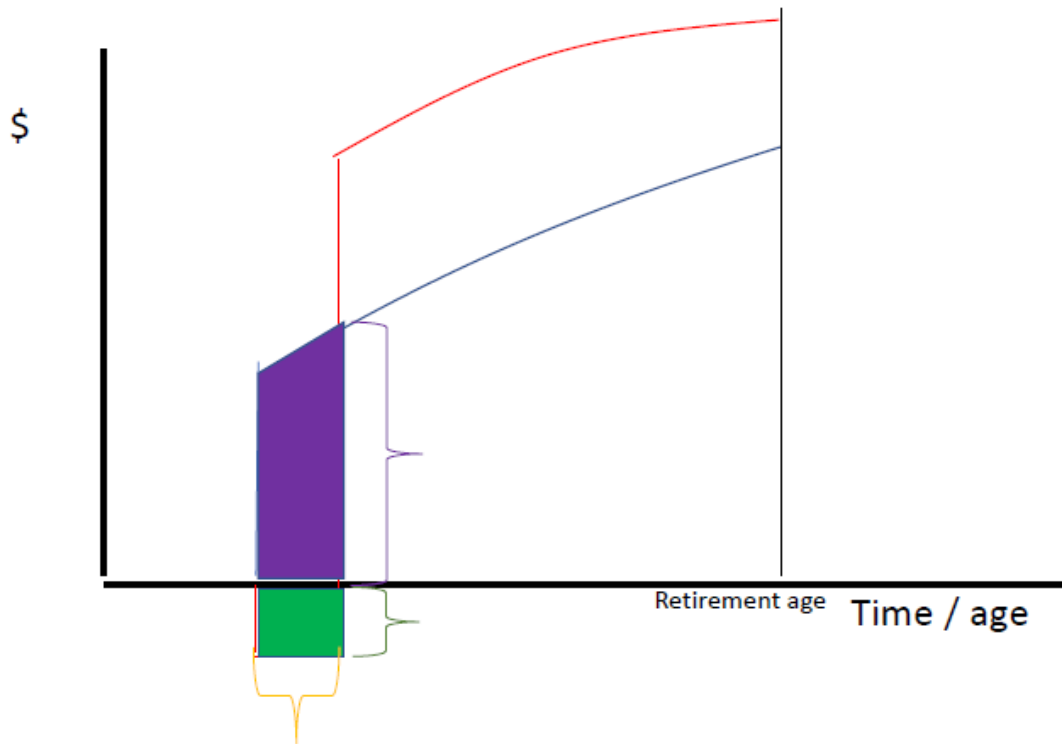Highest=

_____

Lowest=

9) Education

a) Fill in the labels for lines and areas on this graph

b. Explain how you could use this figure to calculate the private rate of return to education.

10. Urbanization.(3 points)
   a. Contrast "urban giantism" with "first-city bias".

   b. Contrast "backward linkage" with "forward linkage".

   c. Describe how the Harris – Todaro migration model explains continued rural to urban migration in spite of there already being existing urban unemployment.

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

Fun with Acronyms: Write out what the acronym stands for

ESAF	
MCA	
UNCTAD	
HIPC	
ICOR	