

St. Lawrence University

First Midterm Exam– September 2021

Economic Development

ECON 336

Full Name:

Student ID:

Writing Time: 90 Minutes

Permitted Materials: Non-programmable Calculators

Instructions: Do not begin the exam yet. The professor will announce the beginning of the exam when he makes sure that everyone has a copy of the exam. In the mean time, go ahead and put your full name and ID number on the space provided. You should feel free to make use of the reference sheet throughout the exam.

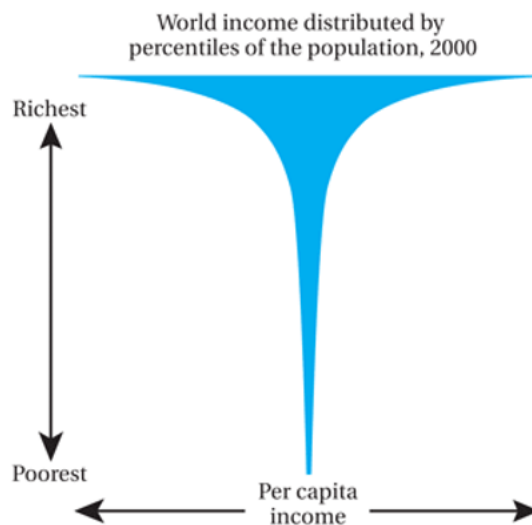
Reference Sheet

- $\Delta Y/Y = s/c - \delta$
- $DI = (\text{ActualValue} - \text{MinimumValue})/(\text{MaximumValue} - \text{MinimumValue})$
- $NHDI = H^{1/3}D^{1/3}I^{1/3}$

Part A: Multiple-choice Questions (30 points)

1. Countries tend to be classified as more or less developed based on
 - A. the literacy rate.
 - B. the poverty rate.
 - C. the level of income per capita.
 - D. the types of goods they produce.
2. A subsistence economy is
 - A. a very low income economy.
 - B. an economy in which people make what they consume.
 - C. an economy in which people receive food for pay.
 - D. all of the above.
3. Development economics must have a scope wider than traditional economics because
 - A. values and attitudes play little role in the pace of development.
 - B. people in developing societies do less utility-maximizing.
 - C. transformation of social institutions is necessary for development.
 - D. all of the above.
4. One of the components of the human development index is
 - A. the percentage of the population who are high school graduates.
 - B. the average daily intake of protein.
 - C. the number of doctors per hundred people in the population.
5. Which measure uses a common set of international prices for all goods and services produced?
 - A. purchasing power parity income levels
 - B. GNI price deflators
 - C. foreign exchange rate conversions to U.S. dollars
 - D. the exchange rates and buyers at the mid-point of the bid/ask spread.
6. The false paradigm model attributes lack of development to
 - A. inadequate attention to price incentives.
 - B. inappropriate advice from rich country economists.
 - C. low levels of savings and investment.
 - D. a lack of government regulation.
7. The neoclassical counter-revolution school supports
 - A. trade restrictions.
 - B. state-owned enterprises.
 - C. eliminating government regulations.
 - D. limitations on foreign investors.

8. According to the theory of structural patterns of development, which of the following tends to occur as a country develops?
- A. a shift from agriculture to industry and services
 - B. an increase in the percentage of income spent on food
 - C. growth of the rural sector
 - D. a decline in trade as a share of GNP
9. The linear stages theory of economic growth fails to recognize that increased investment is
- A. both a necessary and a sufficient condition.
 - B. a necessary but not a sufficient condition.
 - C. a sufficient but not a necessary condition.
 - D. neither a necessary nor a sufficient condition.
10. What does the following diagram show?



- A. Per capita income in the developed countries is much higher than the developing ones.
 - B. Income is distributed evenly in the world
 - C. The huge share of income is controlled by the richest people.
 - D. options A and B
11. Assume a closed economy, perfectly elastic labor supply, and linear technology. Suppose the incremental capital-output ratio (ICOR) is 2, the depreciation rate is 3%, and the gross savings rate is 10%. Use the Harrod-Domar growth equation to determine the rate of growth.
- A. 2%
 - B. 0.2%
 - C. 20%
 - D. 200%

12. The Solow Model implies that countries with small initial capital stocks should grow rapidly. This implies that:
- A. poorer countries should eventually “catch-up” to richer countries (conditional convergence)
 - B. poorer countries are bound to experience explosive growth which will propel their economic output far beyond that of rich countries
 - C. the growth rates between rich and poor countries is bound to diverge
13. In the Solow Model, the point where investment is equal to depreciation is known as
- A. steady state
 - B. bliss point
 - C. growth acceleration point
14. Which of the following is not a component of economic growth?
- A. Capital accumulation
 - B. Growth in population
 - C. Technological progress
 - D. Free markets
15. In what region income inequality is greater?
- A. Latin America and Middle East
 - B. Sun-Saharan Africa
 - C. North America
 - D. East Asia and Oceania

Part B: Numerical and Essay Questions (70 points)

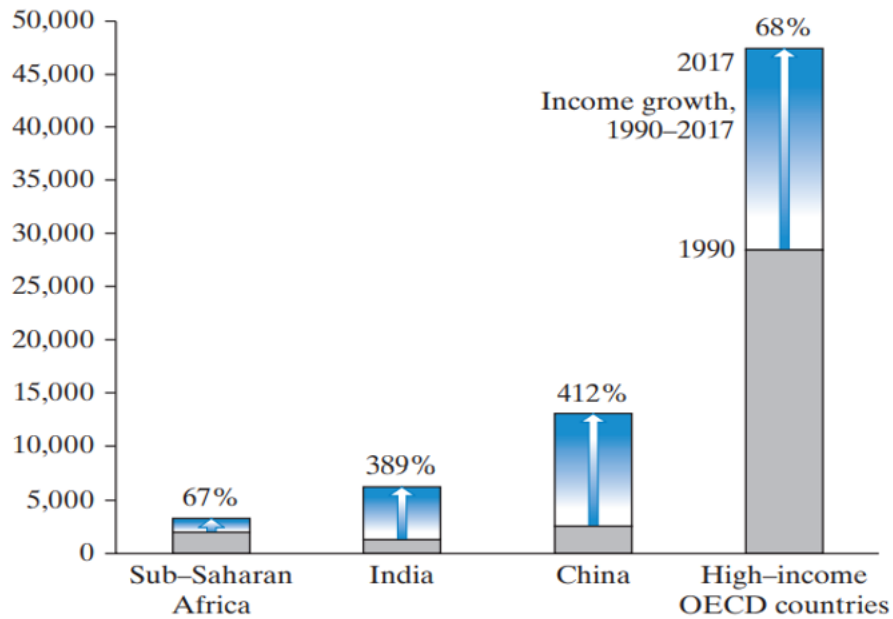
Answer **all** questions in this section using the space provided. Answers are expected to be succinct but complete. Answers that are too long and irrelevant will be penalized.

Question 1 Answer all parts.

1. [4 points] What would be the effects of an increase in the saving rate on GDP growth in the Solow model? What about the Harrod-Domar growth model?
2. [4 points] What is the relationship between income per capita and happiness? (You need to refer to the concept of diminishing marginal utility in your answer.)
3. [4 points] What is the main criticism made by William Nordhaus against measuring standards of living using GDP?

Question 2 The following graph shows the GDP per capita growth from 1990 to 2017 for selected countries and regions.

- [5 points] Briefly compare the bars on the chart below.
- [6 points] Briefly explain what implications this plot has for income per capita convergence.



Question 3 Consider the PPP approach.

1. [4 points] Assume that a basket of goods has been selected to calculate the PPP rate for Algeria. The cost of this basket is 2220 Algerian Dinar (the official currency of Algeria). The same basket costs consumers \$60 to buy in United states. Calculate the PPP rate for Algeria.
2. [8 points] Algeria's GNI per capita in 2020 was 556,756 in Algerian Dinar. Assuming that the official exchange was 137 (\$1= 137 Algerian Dinar), calculate both the GNI per capita, PPP and regular GNI per capita. Briefly explain what implications the difference between the measures have for comparing standards of living between countries.

Question 4 The following table presents the data on selected categories for United Arab Emirates as well as maximum and minimum values in 2019.

United Arab Emirates' Data			
	UAE	Maximum	Minimum
Means Adults Years of Schooling	10.8	15	0
Expected Years of Schooling	12.3	18	0
Life Expectancy Rate at Birth	78	85	20
Log(GNI Per Capita)	11.1	11.22	4.6

1. [8 points] Calculate all dimension indices for all four categories.
2. [4 points] Calculate the NHDI for UAE in 2019.
3. [5 points] According the the World Bank, a value above 0.800 is classified as very high, between 0.700 and 0.799 as high, 0.550 to 0.699 as medium, and below 0.550 as low. What category is UAE in? Can we conclude that UAE is a developed country? Briefly explain your answer.

Question 5 Consider the Lewis model of modern-sector growth in a two-sector surplus-labor economy.

1. [6 points] Briefly describe the labor market in the industrial section. Draw the supply and demand curves for labor.
2. [6 points] What happens if business owners re-invest their profit in non labor saving capital? Show on the graph.
3. [6 points] What happens if business owners re-invest their profit in labor saving capital? Show on the graph. What implication does it have for employment?

——— *End of Examination* ——