

Instructions: Only one section will be graded for correctness. The rest will be graded on completion. You will get 50% for completing the homework assignment with an honest effort and 50% for the graded problem. You may work with one other student. If you do, please only turn in one copy with both of your names on it.

1: Multiple Choice

Instructions: Choose the most correct answer for each question.

(1) Which of the following empirical statements about low income countries is NOT a valid generalization about changes since 1990

- A. Infant mortality rates have fallen substantially.
- B. Rapid population growth has more than offset GNP growth.
- C. Manufacturing has increased as a share of total output.
- D. Primary school enrollment rates have risen sharply.

(2) All of the following reasons have contributed to the enhancement of economic development among the developing nations of the world EXCEPT for:

- A. the information revolution
- B. the globalization of culture
- C. lower transport costs
- D. the spread of democracy

(3) Which of the following statements is true about globalization?

- A. It is a term used by different people to mean different things.
- B. It covers more than just economics.
- C. It is not a new phenomenon.
- D. All of the above

(4) Among the nations of the developing world, new technologies have primarily been responsible for:

- A. eliminating the need for travel.
- B. an obesity epidemic among children under 18.
- C. increased electrical and energy problems.
- D. creating jobs.

(5) A criticism of using GDP to measure growth is that it does not include "social bads;" these include all of the following EXCEPT:

- A. crime.
- B. pollution.
- C. inflation.
- D. congestion.

(6) The human development index is a composite of three basic measures of human welfare. Which of the following is NOT a component of the human development index?

- A. life expectancy
- B. dollars of income
- C. infant mortality rate
- D. years of schooling

(7) For which of the following countries is the divergence between GNP per capita measured at official exchange rates and at purchasing power parity (PPP) likely to be the largest?

- A. Japan
- B. United States
- C. Brazil
- D. Ethiopia

(8) Since the year 2000, economic performance in sub-Saharan Africa has improved; this can be attributed to all of the following reasons EXCEPT for:

- A. improved economic policies and management.
- B. more democratic and accountable governments.
- C. a return to state-directed economic policies.
- D. new technologies.

(9) Countries with slow growth include all of the following EXCEPT:

- A. Madagascar.
- B. Nigeria.
- C. Kenya.
- D. Venezuela.

(10) Economists think that economic growth depends fundamentally on all of the following EXCEPT:

- A. factor accumulations.
- B. inequality.
- C. efficiency.
- D. technological change.

(11) Diminishing returns to capital means that as you add more capital:

- A. output falls.
- B. the additional contribution to output eventually declines.
- C. labor usage falls.
- D. output rises.

(12) Since 1980, GDP per capita has grown more than sevenfold in:

- A. India
- B. China
- C. Egypt
- D. Uruguay

2: Chapter 2

There are three countries in the world: US, Oz, and Adz. Each country sells three products: apples, oranges, and peppers. The prices and quantities sold in country can be seen in the graph below. Prices are in the national currency of each nation. For the US, the currency is dollars. For Oz, the currency is gold. For Adz, the currency is Euros.

Country	P_a	Q_a	P_o	Q_o	P_p	Q_p
US	1	20	3	500	2	40
Oz	2	10	2	100	4	10
Adz	3	50	1	30	2	50

- (a) Find the GDP for each country.
- (b) Exchange rates are defined such that one dollar is equal to either 50 units of gold or 100 Euros. Using this information, calculate the GDP of each country in dollars.
- (c) Calculate the international prices in dollars for each good. Assume that international prices are just a simple average of all prices for that good. Make sure to convert all prices to a common currency before taking your average.
- (d) Find the PPP adjusted GDP for each country.

3: Chapter 3

The country of Cobra Island has an initial level of capital set at 10 units. The population of Cobra Island is unknown, but we do know that it grows each year at some constant rate. The level of total income is 500 cobra dollars. Finally, the total production function of Cobra Island can be described as $Y = 10 * L^{\frac{3}{4}} K^{\frac{1}{4}}$.

- (a) What is the initial population of Cobra Island?
- (b) Let the Solow residual be equal to 0.5. Also, let $w_k = 0.60$, $w_l = 0.40$, $k_1 = 50$, and $L_1 = 100$. Find the growth rate of capital. Find the growth rate of labor.
- (c) Find the growth rate of total income.
- (d) What is the new level of Y? Use your answer from part c to calculate Y_1 .
- (e) Using a continuous compounding growth function, what is the level of total income in this country 10 years after the initial start Y_0 of the problem.
- (f) Take the continuous compounding growth function in part e and keep time as variable t. Transform this equation into a linear equation.