

Chapter 11 ECONOMIC GROWTH AND WEALTH OF NATIONS ANSWERS

1. According to World Bank data, wealthy nations tend to have much lower rates of _____ and much higher rates of _____ when compared to poor nations.

- a. adult literacy; infant mortality
- b. infant mortality; adult literacy**
- c. secondary enrollment; life expectancy
- d. life expectancy; secondary enrollment
- e. mobile cellular subscriptions; electricity access

2. Real per capita gross domestic product (GDP) is higher in the United States than in Bangladesh. Based on that, we could predict the United States to have a higher rate of _____ and a lower rate of _____.

- a. access to clean water; life expectancy
- b. adult literacy; infant mortality**
- c. life expectancy; internet usage
- d. physicians; secondary enrollment
- e. infant mortality; adult literacy

3. Residents of wealthy countries tend to have longer life expectancies because

- a. the residents of wealthier countries tend to work harder than those in poor countries.
- b. the government meets all health care needs in wealthy countries.
- c. stronger economic growth allows for more spending on health care.**
- d. consumers in wealthy countries face lower health care costs.
- e. the residents of poor countries have no desire to consume health care.

4. In 1900, the average annual income of U.S. citizens, in inflation-adjusted 2018 U.S. dollars, was roughly _____.

- a. \$1,000
- b. \$5,000**
- c. \$15,000
- d. \$20,000
- e. \$42,500

5. Average world income began to increase rapidly during _____, when many economies moved away from agriculture and toward manufacturing.

- a. the Enlightenment
- b. the Industrial Revolution**
- c. World War I
- d. World War II
- e. the Great Leap Forward

6. Real per capita income in _____ today is still less than that of the United States in 1850.

- a. Africa
- b. China
- c. Latin America
- d. Western Europe
- e. All of these are correct.

7. In 2018, U.S. gross domestic product (GDP) was roughly \$20.5 trillion. Given that the U.S. population was roughly 327 million people, per capita GDP in the United States in 2018 was roughly _____.

- a. \$15,951
- b. \$35,620
- c. \$49,733
- d. \$54,545
- e. \$62,691

8. The percentage change in nominal gross domestic product (GDP) minus the percentage change in prices and the rate of population growth equals the percentage change in

- a. real per capita GDP.
- b. nominal per capita GDP.
- c. investment.
- d. factors of production.
- e. inflation.

9. The two factors that must be subtracted from the percentage change in nominal gross domestic product (GDP) to yield the percentage change in real per capita GDP are the

- a. percentage change in prices and the rate of investment.
- b. percentage change in prices and the rate of population growth.
- c. rate of investment and the rate of savings.
- d. rate of population growth and the rate of savings.
- e. rate of investment and the rate of population growth.

10. Nominal gross domestic product (GDP) is a poor measure of economic growth because it

- a. does not count investment by private businesses.
- b. overstates the importance of consumer spending.
- c. does not include government spending.
- d. ignores imports and exports.
- e. does not consider changes in prices or population growth.

11. Change in real per capita gross domestic product (GDP) is the best measure of economic growth because it

- a. adjusts changes in nominal GDP for changes in the price level and population growth.
- b. ignores changes in the price level used to compute nominal GDP.
- c. includes government spending, whereas nominal GDP does not.
- d. includes all economic activity, including sales of illegal goods and services, which nominal GDP ignores.
- e. does not consider changes in the population, which are not relevant to GDP anyway.

12. Annual real per capita gross domestic product (GDP) in the United States was roughly \$55,000 in 2018. If per capita GDP grew by 2% the following year, by 2019 the annual real per capita GDP would be _____.

- a. \$27,500
- b. \$48,300
- c. \$56,100
- d. \$58,700
- e. \$62,500

13. From 2009 to 2010, nominal gross domestic product (GDP) in the United States grew by 3.8%. Given that prices increased by 1% and the population grew by 1%, we know that real per capita GDP grew by _____.

- a. 3.8%
- b. 1.8%
- c. 2.8%
- d. 4.8%
- e. 5.8%

14. From 2017 to 2018, a country's nominal gross domestic product (GDP) grew by 5.5%. Given that prices increased by 2% and real per capita GDP grew by 2.7%, we know that the population grew by _____.

- a. 0.8%
- b. 1.6%
- c. 2.3%
- d. 3.5%
- e. 4.7%

15. In 2017, real per capita gross domestic product (GDP) in the United States was roughly \$53,357. In 2018, real per capita GDP in the United States was roughly \$54,542. Therefore, between 2017 and 2018, the rate of economic growth in the United States was _____.

- a. 0.5%
- b. 1.3%
- c. 2.2%
- d. 4.7%
- e. 6.2%

16. From 2009 to 2010, real per capita gross domestic product (GDP) in the United States grew by 1.8%. Given that prices increased by 1% and the population grew by 1%, we know that nominal GDP grew by _____.

- a. 4.8%
- b. 1.8%
- c. 2.8%
- d. 3.8%**
- e. 5.8%

17. In 2015, real per capita gross domestic product (GDP) in Australia was \$55,183.74. By 2016, Australia's per capita GDP had increased to \$55,875.10. What was Australia's economic growth rate from 2015 to 2016?

- a. 0.78%
- b. 1.25%**
- c. 2.77%
- d. 3.65%
- e. 4.23%

18. From 2017 to 2018, nominal gross domestic product (GDP) in the United States increased by 5.2%. Does this mean that the U.S. economy actually grew by 5.2% during that time period?

- a. Yes, because that is what nominal GDP measures.
- b. Yes, because nominal GDP takes into account changes in prices and the population.
- c. No, because nominal GDP considers only changes in prices, not population growth.
- d. No, because nominal GDP considers only population growth, not changes in prices.
- e. No, because nominal GDP ignores changes in prices and population growth.**

19. We know that resources are important for economic growth. Which of the following statements about resources is true?

- a. All resources are ultimately man-made, because without their use by people, resources would have no value.
- b. Very few resources are truly scarce; in fact, most exist in abundance.
- c. Resources can be natural, like mineral deposits or forests, or man-made, like machinery and factories.**
- d. All countries have the same endowments of resources.
- e. Most countries do a very poor job of exploiting the resources they have.

20. Lauren owns a bakery. She wants to increase her daily production of baked goods, so she knows she needs to acquire more resources. Which of the following actions would represent an increase in the physical capital resource at her bakery?

- a. moving into a larger space**
- b. increasing employee training
- c. hiring more employees
- d. buying better-quality ingredients
- e. hiring an accountant to handle payroll

21. Maritza owns a restaurant. She wants to increase the number of patrons she serves each month, so she knows she needs to acquire more resources. Which of the following actions would represent an increase in the physical capital resource at her restaurant?

- a. increasing the amount of training for her servers
- b. hiring more cooks and servers
- c. purchasing more fresh ingredients
- d. buying more tables and chairs**
- e. updating her recipes

22. Why would an increase in capital resources lead to an increase in worker productivity?

- a. More capital means that fewer workers are needed, increasing output.
- b. More capital leads to a decrease in wages, leading employees to work harder.
- c. More capital means that workers have better tools and equipment and can produce more.**
- d. More capital means that the owners of a company reap all of the benefits of labor.
- e. More capital causes decreasing returns to scale.

23. Lauren owns a bakery. She wants to increase her daily production of baked goods, so she knows she needs to acquire more resources. Which of the following actions would represent an increase in the human capital resource at her bakery?

- a. repairing a broken delivery van
- b. increasing employee training**
- c. purchasing ingredients in bulk
- d. buying better-quality ingredients
- e. moving into a larger space

24. Steve owns a bike shop. He wants to increase the number of bikes he sells each week, and he wants to use a technological advance to do so _____ would represent a technological advance at his bike shop.

- a. increasing the number of bikes he holds in inventory
- b. utilizing an online ordering system that allows him to sell bikes across the country**
- c. increasing the number of employees
- d. providing more training for his staff
- e. increasing his inventory of helmets and accessories that he sells

25. Lauren owns a bakery. She wants to increase her daily production of baked goods, and she wants to use a technological advance to do so _____ would represent a technological advance at her bakery.

- a. purchasing more local ingredients
- b. increasing the number of employees
- c. increasing the number of mixing bowls and spoons
- d. installing a convection oven that can bake bread in half the time**
- e. better training for bakery staff

26. Krista owns a hair salon. She wants to increase the number of clients she serves each month, and she wants to use a technological advance to do so _____ would represent a technological advance at her hair salon.

- a. more scissors, combs, and mirrors
- b. better training for her staff
- c. increasing the number of employees
- d. installing a new hair dryer that can dry hair in half the time, with less damage to the hair,**
- e. a larger hair salon with more chairs

27. All countries have some resources and technology available to them. The ones that grow fastest are the ones that

- a. hoard their resources and never use them.
- b. invade other countries to capture their resources.
- c. have the institutions in place that allow those resources to be fully developed.**
- d. allow other countries to extract their resources for payment.
- e. require that all resources are collectively owned.

28. Between 2006 and 2010, real per capita gross domestic product (GDP) in India grew at an average rate of 7.11% per year. Which of the following factors could have contributed most to this rapid escalation in the growth rate?

- a. advances in technology**
- b. increases in government regulations
- c. decreases in education standards
- d. a significant increase in taxes
- e. restrictions on immigration

29. In 1950, residents in Liberia were wealthier than those in Taiwan. Today, per capita gross domestic product (GDP) in Taiwan is more than 20 times that of Liberia. Which of the following best explains why Taiwan is now so much wealthier than Liberia?

- a. Taiwan is a very large country with lots of resources, while Liberia is very small with few resources.
- b. Taiwan's political climate has been stable, while there has been constant violent unrest in Liberia.**
- c. Private property rights are enforced in Liberia, but not in Taiwan.
- d. Inflation rates are stable in Liberia, but unpredictable in Taiwan.
- e. Taiwan does not trade with other countries, while Liberia has many trading partners.

30. Today, not all regions of the world enjoy the same level of annual real per capita gross domestic product (GDP). The regions that have higher levels of real per capita GDP probably also have

- a. lower levels of government spending.
- b. very little new business formation and job growth.
- c. higher rates of poverty.
- d. growth-promoting institutions like property rights.**
- e. higher income tax rates.

31. Is having abundant resources an absolute guarantee of economic growth and prosperity?

- a. Yes, as long as a country has a large number of resources, it will prosper.
- b. No, countries also need an aggressive military.
- c. Yes, there are no prosperous countries without a large amount of resources.
- d. No, other factors like institutions and technological advances are relevant too.**
- e. No, many countries thrive under collective ownership of property.

32. Competitive markets contribute significantly to economic growth because

- a. they encourage firms to exploit consumers via high prices.
- b. people who want to participate don't face barriers to entry.**
- c. they employ high levels of government regulations.
- d. they prevent foreign firms (with better ideas) from entering markets.
- e. they create an incentive for firms to differentiate their products.

33. What is the relationship between enforcing a nation's laws and economic growth?

- a. Enforcing laws is bad for growth. It interferes with efficient markets.
- b. Enforcing laws is bad for growth. It creates too much red tape and reduces investment.
- c. Enforcing laws is good for growth. It creates stability and incentivizes investment.**
- d. Enforcing laws is good for growth. The government is always more efficient at making market decisions than individuals.
- e. Enforcing laws is bad for growth. It disincentivizes investment.

34. Sasha's starting salary at her new job is \$50,000. Her company gives a performance raise of 4% each year. If Sasha continues in the same position and always receives the performance raise, in how many years will she double her salary?

- a. 4 years
- b. 5.7 years
- c. 17.5 years**
- d. 20 years
- e. 52 years

35. Real per capita gross domestic product (GDP) matters because

- a. it leads to population growth.
- b. it correlates with better human welfare conditions.**
- c. more money always makes people happier.
- d. poor countries are destined to be poor forever.
- e. it measures a nation's price level.

36. From 2016 to 2017, nominal gross domestic product (GDP) in the Mexico grew by 9.3%. Given that prices increased by 6.0% and the population grew by 1.3%, we know that real per capita GDP grew by _____.

- a. 2.0%**
- b. 4.3%
- c. 5.4%
- d. 7.3%
- e. 16.6%

37. The rule of 70 shows us that

- a. economic growth rates are not important for living standards.
- b. it is not possible for poor countries to get out of poverty.
- c. very large economic growth rates are required to improve living standards.
- d. small and consistent economic growth rates can improve living standards.**
- e. there is not much variation in economic growth rates across countries.

38. What happened at the end of the eighteenth century that radically altered the rate of global income growth and standard of living?

Answer: The Industrial Revolution began in Western Europe, continued there, and also developed in North America. That time period was marked by advances in technology and the accumulation of capital goods. Prior to that time, technological advances had kept pace with population growth only. During and after the Industrial Revolution, the rate of technological advance exceeded population growth, leading to increases in average income and standard of living.

39. How would an increase in capital goods, if the size of the labor force is held constant, help to make workers more productive and increase economic growth?

Answer: An increase in capital resources, if the size of the labor force is held constant, would increase the number and quality of tools and equipment that workers are able to use. Workers could then produce more output in the same amount of time; they could also produce the same amount of output in less time. Either way, workers would be more productive, which would lead to an increase in economic growth.

40. Explain how improved education for young people today can increase economic growth in the future.

Answer: Improved education today improves the skills and knowledge of young people. As a result, they are better trained when they enter the workforce. This higher-quality education increases the level of human capital in the economy. The workforce of the future will be more efficient and productive as a result of improved education today.

41. List and explain the different institutions that are important for economic growth.

Answer: Private property rights are important because they give individuals an incentive to engage in economic activity. Political stability and rule of law are important because investors are attracted to predictable payouts. Furthermore, corruption is an obstacle to growth, because it directs resources inefficiently. Competitive and open markets ensure that production and consumption decisions are made efficiently and that they attract investment. Efficient taxes fund a stable government while minimally interfering with production and consumption decisions. Stable money and prices encourage investment and economic activity because this stability allows investors to anticipate future prices and encourages them to enter into contracts with confidence of a return.

42. Explain how an impoverished country with limited technology, limited natural resources, or limited human or physical capital can maximize its economic growth.

Answer: For a country with limited factors of production, it is important to maximize investment. Private property rights will encourage individuals to pursue economic activity because they can enjoy the results of their labor and investment. Stability and rule of law will encourage foreign and domestic investment. Competitive and open markets help consumption and production decisions to be made efficiently. Free trade policies will enable markets to seek a comparative advantage in production. Encouraging foreign investment will help keep interest rates low and make funds available for development. Efficient taxes fund a stable government and create financial security while limiting the influence on economic allocations.

43. News sources often report nominal gross domestic product (GDP). Explain how considering only nominal GDP growth can lead to a naïve estimation of real GDP growth.

Answer: GDP growth must be adjusted for population growth and changes in price levels. If we consider only nominal GDP growth, we could be measuring simple changes in prices or increased production from increased population size. This measure is not a true depiction of growth but rather represents only nominal, or apparent, growth. Inflation must be subtracted from nominal GDP growth and population growth to arrive at real GDP growth.

44. What would be the effect on economic growth of increasing the size of the labor force through population growth while keeping physical and human capital constant?

Answer: An increase in the labor force alone, without corresponding increases in physical or human capital, would likely have a minimal or even negative impact on economic growth. Capital resources are important to increasing working productivity. With more workers and constant capital, workers' productivity would decrease. Furthermore, economic growth is negatively correlated to population size. If the labor force is increasing simply as a result of population growth, then the net impact on economic growth of more workers may be minimal or zero.

45. Over the past 20 years, China has grown by about 10% per year. If China could somehow sustain this growth rate, approximately how many years will it take to double income?

Answer: We use the rule of 70 here: $70/10 = 7$ years. If China grows by 10% per year, income will double every 7 years.

46. Explain how a country's geography can affect its economic growth.

Answer: Geographical location facilitates trade. Locations on coasts or along rivers have developed more rapidly than areas inland. Geography also dictates climate and weather, which affect agriculture and tourism opportunities. Finally, geography can affect the occurrence of diseases and the ability to control them.