

Multiple choice: Choose the best response to each prompt.

1. The production possibilities frontier illustrates which of the following?
 - (a) The profit maximizing choice of businesses for how much of two goods to produce.
 - (b) How economies can grow by giving people and businesses money.
 - (c) The limits to the total quantity of production of two goods given an economy's existing resources and technologies.
 - (d) The total consumer demand for two different goods.

2. Suppose there is no unemployment in the economy and society decides that it wants more of one good. Which of the following statements is true?
 - (a) It can increase output without giving up another good.
 - (b) It will have to give up production and consumption of some other good.
 - (c) It can only achieve this with an increase in resource supplies.
 - (d) It can only achieve this with an advance in technology.

3. A technological advance in the production of a good or service will shift the
 - (a) supply curve to the right.
 - (b) demand curve to the right.
 - (c) demand curve to the left.
 - (d) supply curve to the left.

4. If a shortage exists in a market we know that the existing price is
 - (a) above equilibrium price and quantity supplied is greater than quantity demanded.
 - (b) below equilibrium price and quantity demanded is greater than quantity supplied.
 - (c) above equilibrium price and quantity demanded is greater than quantity supplied.
 - (d) below equilibrium price and quantity supplied is greater than quantity demanded.

5. What would most likely happen to the equilibrium price and quantity in the market for a product if the price of an input used to produce the product decreased, the price of a substitute good (for consumers) increased, some suppliers decided to enter the market, and health officials announced that consuming the product lowers the risk of heart disease?
- (a) Price will decrease and the effect on quantity is ambiguous (uncertain).
 - (b) Price will increase and the effect on quantity is ambiguous (uncertain).
 - (c) Quantity will increase and the effect on price is ambiguous (uncertain).
 - (d) The effect on both price and quantity is ambiguous (uncertain).
6. You are traveling in Ireland and are thinking about buying a new smartphone. You have decided you would be willing to pay \$125 for a new smartphone, but smartphones in Ireland are all priced in euros. If the exchange rate is 0.85 euros per dollar, what is the highest price in euros you would be willing to pay for a smartphone?
- (a) 106.25 euros
 - (b) 147 euros
 - (c) 125.85 euros
 - (d) 110.15 euros
7. Suppose incomes rise in Europe, but there is no change in incomes in the United States. As a result, Europeans demand more products produced in the United States and in Europe. As a result,
- (a) both the U.S. dollar and Euro will appreciate relative to each other.
 - (b) the U.S. dollar will depreciate relative to the Euro.
 - (c) the Euro will depreciate relative to the U.S. dollar.
 - (d) the U.S. / Euro exchange rate will not be affected.
8. How will an interest rate increase in the United States affect equilibrium in the foreign exchange market?
- (a) The U.S. dollar will appreciate, and the equilibrium quantity of dollars traded cannot be determined.
 - (b) The equilibrium exchange rate cannot be determined, and the equilibrium quantity of dollars traded will increase.
 - (c) The U.S. dollar will depreciate, and the equilibrium quantity of dollars traded cannot be determined.
 - (d) The U.S. dollar will appreciate, and the equilibrium quantity of dollars traded will increase.
9. Which of the following would be the best measure of economic growth?
- (a) Growth of real GDP per capita
 - (b) Inflation per capita
 - (c) Growth of real GDP - Inflation
 - (d) Growth of nominal GDP

10. Which of the following is an example of fixed investment?
- (a) An individual consumer buying a new car
 - (b) Buying an existing home
 - (c) Building a new factory to produce shoes
 - (d) A business producing and stocking up on inventory to sell later
11. Which of the following is a marginally attached worker?
- (a) Someone who was laid off and decided to go back to school instead
 - (b) Someone who lost their job and is actively seeking another job.
 - (c) Someone who was fired and is looking for another job but having difficulty finding one because of their poor work record
 - (d) Someone who was laid off, wants another job, but hasn't started looking for a job yet.
12. Suppose the economy goes into recession, leading to an economy-wide decrease in spending. What is the impact wages and employment wages and employment?
- (a) Increase in employment and an increase in wage
 - (b) Increase in employment and a decrease in wage
 - (c) Decrease in employment and an increase in wage
 - (d) Decrease in employment and decrease in wage
13. Suppose that recent declines in the stock market results in a decrease in the number of workers that are age 55 and older that decide they want to retire. What would be the immediate effect on the labor market?
- (a) Increase in labor supply
 - (b) Decrease in labor demand
 - (c) Decrease in labor supply
 - (d) Increase in labor demand
14. Suppose there is a drop in labor demand, but no immediate change in the market wage. Which of the following may result?
- (a) A decrease in unemployment
 - (b) An increase in unemployment
 - (c) An increase in labor supply
 - (d) An increase in worker shortage

15. Which of the following would cause a rightward shift in demand for both labor and investment?
- (a) An improvement in technology that makes all factors of production more productive
 - (b) A global supply chain disruption that causes the production of goods and services to be more costly and less efficient.
 - (c) A decrease in interest rates.
 - (d) A decrease in interest rates and a decrease in wages.
16. Which of the following leads to a decrease in interest rates and an increase in investment in equilibrium?
- (a) An improvement in businesses outlook on future profitability
 - (b) A drop in consumer confidence, leading to an increase in precautionary saving
 - (c) A drop in business confidence, leading to a reduction in investment in capital
 - (d) An improvement in consumer confidence leading to an increase in consumer borrowing
17. Which of the following is a source of aggregate productivity growth?
- (a) Growth in exports per capita
 - (b) Growth in consumption per capita
 - (c) Growth in GDP deflator
 - (d) Growth in human capital
18. Which of the following is the definition of human capital?
- (a) Skills and knowledge of a workforce obtained through education and training
 - (b) Buildings, machines, and other manufactured goods used in the production of goods and services
 - (c) Improvements in technology
 - (d) Workers time and effort used in the production of goods and services
19. Which of the following leads to an increase in long-run real GDP per worker?
- (a) An increase in the inflation rate
 - (b) A movement by governments to increase financial support for unemployed people
 - (c) A decrease in imports
 - (d) An improvement in technology

20. When the marginal propensity to save decreases, what happens to the expenditure multiplier?
- (a) The expenditure multiplier stays the same
 - (b) The expenditure multiplier increases
 - (c) The impact on the multiplier cannot be determined
 - (d) The expenditure multiplier decreases
21. Suppose when consumers get a \$80 increase in income, their consumption spending increases by \$60 and there is no change in imports. What is the expenditure multiplier?
- (a) 4
 - (b) 0.75
 - (c) 0.25
 - (d) 80
22. How do increases in military spending affect the aggregate demand curve?
- (a) An increase in military spending is an increase in government spending, which causes the aggregate demand curve to shift to the left.
 - (b) An increase in military spending leads to an increase in government borrowing, which causes the aggregate demand curve to shift to the left.
 - (c) An increase in military spending is an increase in government spending, which causes the aggregate demand curve to shift to the right.
 - (d) An increase in military spending leads to an increase in taxes, which causes aggregate demand to shift to the left.
23. Which of the following can lead to an increase in real GDP and a decrease in the aggregate price level in the short run?
- (a) A leftward shift in aggregate demand
 - (b) A rightward shift in aggregate demand
 - (c) A rightward shift in aggregate supply
 - (d) A leftward shift in aggregate supply
24. What is the primary role of the Federal Reserve in the U.S. economy?
- (a) Regulating international trade agreements
 - (b) Directly controlling private sector investments
 - (c) Setting tax policies for the federal government
 - (d) Managing interest rates and the quantity of money to promote economic stability

25. What is the effect of increasing the IORB rate?

- (a) It has no effect on bank lending behavior
- (b) It forces the Federal Reserve to reduce its balance sheet
- (c) It encourages banks to lend more
- (d) It discourages banks from lending and increases reserves held at the Federal Reserve

Short-answer and problem-solving questions: Provide written answers to each question in the space provided.

26. (5 points) Suppose an economy produces automobiles and planes according the following production possibilities table:

Production Choice	Automobiles	Planes
A	200	0
B	180	5
C	140	10
D	80	15
E	0	20

Compute the opportunity cost of producing a plane at each level in the table. Does plane production exhibit increasing, decreasing, or constant opportunity cost?

27. (5 points) Suppose weather conditions in spring and summer provided an excellent growing season for tomatoes, while at the same time, new research is reported in the news suggesting tomatoes provide more health benefits than previously thought. Describe and illustrate the impact on the equilibrium price and quantity of tomatoes.

28. (5 points) Suppose European demand for electronics increases. Japan is a large source for electronic imports to the Euro area. Describe and illustrate the impact on the equilibrium exchange rate between the Japanese Yen (JPY) and the Euro (EUR).

29. (5 points) Suppose an economy produces only smartphones and record players and experiences the following quantities and prices:

Smartphones in 2019: Price = \$200, Qty = 30

Record Players in 2019: Price = \$120 Qty = 25

Smartphones in 2020: Price = \$210, Qty = 35

Record Players in 2020: Price = \$130 Qty = 27

Use 2019 as a base year and compute the real GDP for both 2019 and 2020. By what percentage did real GDP grow?

30. (5 points) Suppose an economy has a working-age population with the following characteristics:
- 15 retired
 - 100 employed
 - 25 people not working and looking for a job
 - 15 people not working, going to school full time instead of looking for work
 - 10 people recently laid off, but not looking for work because they think no jobs are available.

What is the labor force participation rate?

31. (5 points) Suppose more two-adult households decide to have only one member of the household participate in the labor force, rather than both adults. Describe and illustrate the impact on equilibrium wages and employment.

32. (5 points) Suppose businesses expect demand for their products and services to increase in the near future. Describe and illustrate the impact on equilibrium investment and interest rate.

33. (5 points) Suppose new artificial intelligence technologies make businesses more productive. Describe and illustrate the long-run impact on investment, interest rate, and real GDP per worker.
34. (5 points) Suppose past evidence revealed that when consumers received an \$800 tax rebate, they increased their spending by \$650, including \$100 on imported goods. The country is currently in a recession. Real GDP is \$14.4 trillion and potential GDP is estimated to be \$16.1 trillion. If the government decided to increase government spending to bring the economy out of its recessionary gap, how much should government spending be increased?
35. (5 points) Suppose the economy is initially in a short-run equilibrium where GDP is above potential GDP and the economy is experiencing a high level of inflation (i.e. an expansionary gap or inflationary gap). Illustrate this situation in an aggregate demand/aggregate supply model and a labor market model. Suggest a monetary policy to fix the problem, describe the change in interest rates, and describe and illustrate the impact on real GDP, price level, wage, and employment.