

**Multiple choice:** Choose the best response to each prompt.

1. Real GDP per capita can be used for what purpose?
  - (a) Comparing population sizes across time
  - (b) Comparing population growth rates between countries
  - (c) Comparing inflation rates between countries
  - (d) Comparing standards of living between countries
  
2. Which of the following is true among countries with the highest levels of real GDP per capita in the world
  - (a) These countries have high rates of growth of real GDP per capita compared to the rest of the world.
  - (b) Most of these countries are experiencing decreases in average income per person.
  - (c) Most of these countries' economies are contracting.
  - (d) These countries have low rates of growth of real GDP per capita compared to the rest of the world.
  
3. Which of the following is a source of aggregate productivity growth?
  - (a) Growth in the labor force
  - (b) Technological improvements
  - (c) Growth in imports per capita
  - (d) Growth in GDP deflator per capita
  
4. Which of the following is defined as the skills and knowledge that are applied to producing goods and services?
  - (a) Capital stock
  - (b) Human capital
  - (c) Labor stock
  - (d) Technological stock
  
5. Diminishing marginal product of capital causes which of the following regarding the productivity curve?
  - (a) Productivity curve shifts downward when capital stock per worker decreases
  - (b) Productivity curve is upward sloping with increasing capital stock per worker. but at a decreasing rate
  - (c) Productivity curve is downward sloping as capital stock per worker increases
  - (d) Productivity curve is downward sloping with respect to capital stock per worker, but at an increasing rate

6. Which of the following would cause an upward shift of the productivity curve?
- (a) Increase in capital per worker
  - (b) Increase in workers' wages
  - (c) Increase in the number of workers
  - (d) Increase in human capital
7. Which of the following government policies can lead to long-run improvements in real GDP per worker?
- (a) Restrictions on imports
  - (b) Increase in government budget deficits
  - (c) Increase in inflation
  - (d) Investment in education
8. Which of the following leads to an increase in long-run real GDP per worker?
- (a) A country decreases their inflation
  - (b) Governments increase their spending without an increase in taxes
  - (c) Increase in the GDP Deflator
  - (d) Increase in financial capital inflows
9. Suppose when consumers receive an additional \$200 of income, on average they increase their spending by \$170. What is the marginal propensity to save?
- (a)  $MPS = \$30$
  - (b)  $MPS = 0.85$
  - (c)  $MPS = 0.15$
  - (d)  $MPS = 200$
10. When the marginal propensity to import decreases, what happens to the expenditure multiplier?
- (a) The impact on the multiplier cannot be determined
  - (b) The expenditure multiplier decreases
  - (c) The expenditure multiplier increases
  - (d) The expenditure multiplier stays the same

11. When the marginal propensity to consume decreases, what happens to the expenditure multiplier?
- (a) The expenditure multiplier decreases
  - (b) The expenditure multiplier increases
  - (c) The impact on the multiplier cannot be determined
  - (d) The expenditure multiplier stays the same
12. If consumer confidence drops, what would be the impact on consumer spending decisions today?
- (a) Consumers decrease spending today
  - (b) There is no change in spending today
  - (c) The change in consumer spending cannot be determined
  - (d) Consumers increase spending today until the future when income increases
13. Suppose a drop in stock market values leads to a decrease in consumer wealth. What impact will this have on consumption decisions?
- (a) Increase in consumer spending
  - (b) Decrease in consumer spending
  - (c) There is no change in consumer spending as a result of a change in stock market wealth
  - (d) A decrease in consumer spending, but only if the decrease in stock market values also results in a decrease in income
14. Suppose there is an increase in the interest rate. What is the impact on investment spending plans?
- (a) Investment is indeterminate.
  - (b) Decrease in investment
  - (c) Investment spending stays the same
  - (d) Increase in investment
15. Suppose there is an improvement in businesses' economic outlook. What will be the impact on expenditure demand?
- (a) Decrease in consumption spending
  - (b) Increase in investment spending
  - (c) Increase in consumption spending
  - (d) Decrease in investment spending

16. Which of the following is one explanation as to why the aggregate demand curve slopes downward?
- (a) Decreases in the U.S. price level relative to the price level in other countries lead to lower net exports.
  - (b) Decreases in the price level raise the interest rate and therefore increase consumption spending.
  - (c) Decreases in the price level raise real wealth and therefore increase consumption spending.
  - (d) Decreases in the price level raise the interest rate and increase investment spending.
17. How does a cut in government spending on education affect the aggregate demand curve?
- (a) A decrease in education spending leads to less government borrowing, which shifts the aggregate demand to the right.
  - (b) A decrease in education spending leads to a decrease in consumption demand, leading to a leftward shift in the aggregate demand curve.
  - (c) A decrease in government spending causes the aggregate demand curve to shift to the left.
  - (d) A decrease in education spending leads to a decrease in human capital, which shifts the productivity curve downward.
18. If the U.S. dollar depreciates relative to its major trading partners, what will be the impact on the aggregate demand curve?
- (a) The depreciation will lead to an increase in interest rates, which causes the aggregate demand to shift to the left.
  - (b) The change in exports will be offset by the change in imports, leading to no change in the aggregate demand curve.
  - (c) Exports will increase and imports will decrease, both leading to an increase / rightward shift in aggregate demand.
  - (d) Exports will decrease and imports will increase, both leading to an increase / leftward shift in aggregate demand.
19. Suppose the government decreases the sales tax rate. What would be the impact on aggregate demand?
- (a) This results in a movement (not a shift) along the aggregate demand curve to the right.
  - (b) A decrease in sales tax increases government saving, shifting the aggregate demand to the right.
  - (c) A decrease in the sales tax reduces government borrowing, shifting aggregate demand to the left.
  - (d) A decrease in the sales tax makes consumption less expensive, causing aggregate demand to shift to the right.

20. Which of the following describes the nature of the short-run aggregate supply curve?
- (a) As the aggregate price level increases, the quantity of investment increases, leading to a rightward shift in aggregate supply.
  - (b) The short-run aggregate supply curve is determined by production possibilities. It is not affected by the aggregate price level.
  - (c) As the aggregate price level increases, the quantity of investment decreases, leading to a leftward shift in the aggregate supply.
  - (d) As the aggregate price level increases, the total quantity of all final goods and services supplied in the short-run in an economy increases.
21. Suppose there is a decrease in the interest rate? What is the impact on the market for final goods and services?
- (a) Aggregate supply shifts to the right, leading to an increase in real GDP and a decrease in the price level in the short run.
  - (b) Aggregate demand shifts to the right, leading to an increase in real GDP and an increase in the price level in the short run.
  - (c) Aggregate demand shifts to the left, leading to a decrease in real GDP and a decrease in the price level in the short run.
  - (d) Aggregate supply shifts to the left, leading to a decrease in real GDP and an increase in the price level in the short run.
22. Which of the following would cause aggregate demand to shift to the right?
- (a) A decrease in the aggregate price level.
  - (b) An increase in taxes, leading to a decrease in government borrowing.
  - (c) A decrease in demand for exports.
  - (d) An improvement in the consumer confidence, leading to an increase in consumption demand.
23. Which of the following would cause the short-run aggregate supply to the right?
- (a) An improvement in technology.
  - (b) A decrease in demand for exports.
  - (c) An increase in the global price of energy.
  - (d) An increase in demand for consumption.

24. Suppose there is a disruption in global supply chains making it more difficult and more costly to produce goods and services. What is the short-run impact on the market for final goods and services?
- (a) Increase in the aggregate price level and a decrease in real GDP.
  - (b) Increase in the aggregate price level and an increase in real GDP.
  - (c) Decrease in the aggregate price level and an increase in real GDP.
  - (d) Decrease in the aggregate price level and a decrease in real GDP.
25. Suppose business confidence improves, leading to an increase in investment spending. What is the short-run equilibrium impact on real GDP and price level?
- (a) Increase in the aggregate price level and an increase in real GDP.
  - (b) Increase in the aggregate price level and a decrease in real GDP.
  - (c) Decrease in the aggregate price level and a decrease in real GDP.
  - (d) Decrease in the aggregate price level and an increase in real GDP.

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

26. (5 points) Suppose the government cuts taxes to consumers. Suppose this leads to only a temporary increase in consumer spending and businesses do not respond by expanding capital. Describe and illustrate the long-run impact on output per worker.
27. (5 points) Suppose while maintaining a balanced budget, the government increases availability of subsidized loans and grants to support people getting two-year and four-year college degrees. Describe and illustrate the impact this may have on long-run output per worker.
28. (5 points) Suppose a country reduces its legal barriers to foreign direct investment, which makes it more profitable for foreign companies to develop manufacturing and service facilities in a country.to answer this question.

29. (5 points) Suppose U.S. consumers become more cautious, and as a precautionary measure, increase their saving and decrease their demand for final goods and services by \$600bn. Suppose the marginal propensity to consume is 0.80 and the marginal propensity to import is 0.15. Compute the immediate change in real GDP in the United States.
30. (5 points) Suppose an increase in consumer confidence leads to a \$80 billion increase in consumer spending. Suppose also that a past \$500 tax rebate revealed that consumers responded by increasing their spending by \$350 and increased their import spending by \$50. Compute the immediate change in real GDP in the United States.
31. (5 points) Suppose the marginal propensity to consume is 75% and the marginal propensity to import is 5%. The economy is in a recession. Real GDP is \$10 trillion, and at full employment real GDP would be \$10.5 trillion. Congress and the president decide to increase government spending in an effort to push real GDP to potential GDP. How much should government spending be increased by?



32. (5 points) Suppose businesses become pessimistic about their future profitability. Describe and illustrate the short-run impact on real GDP and price level.
33. (5 points) Suppose there is an improvement in global supply chain processes that makes it less costly to produce goods and services. Describe and illustrate the short-run impact on real GDP and price level.
34. (5 points) Suppose the economy is initially at the long-run equilibrium where short-run equilibrium GDP is equal to potential GDP. Suppose then there is an improvement in consumer confidence. Describe and illustrate both the short-run and long-run effects on real GDP and the price level.

35. (5 points) Suppose the economy is initially in a short-run equilibrium where GDP is below potential GDP (i.e. a recessionary gap). Suggest a change in tax policy to fix the problem, and describe and illustrate the impact on real GDP and the price level.