3.1 How Much Does the Economy Produce? The Production Function

1) A mathematical expression relating the amount of output produced to quantities of capital and labor utilized is the
   A) real interest rate.
   B) productivity relation.
   C) production function.
   D) marginal product.
Answer: C
Diff: 1
Topic: Section 3.1
Question Status: Previous Edition

2) In the production function \( Y = AF(K, N) \), \( A \) is ________, \( K \) is ________, and \( N \) is ________.
   A) total factor productivity; the capital stock; the number of workers employed
   B) total factor productivity; investment; the number of workers employed
   C) the productivity of labor; the capital stock; the size of the labor force
   D) the productivity of labor; investment; the size of the labor force
Answer: A
Diff: 1
Topic: Section 3.1
Question Status: Previous Edition

3) In the production function \( Y = AF(K, N) \), total factor productivity is
   A) \( Y/A \).
   B) \( A \).
   C) \( K/N \).
   D) \( Y/N \).
Answer: B
Diff: 1
Topic: Section 3.1
Question Status: Previous Edition

9) The two main characteristics of the production function are
   A) it slopes downward from left to right, and the slope becomes flatter as the input increases.
   B) it slopes upward from left to right, and the slope becomes steeper as the input increases.
   C) it slopes upward from left to right, and the slope becomes flatter as the input increases.
   D) it slopes downward from left to right, and the slope becomes steeper as the input increases.
Answer: C
Diff: 1
Topic: Section 3.1
Question Status: Previous Edition

11) The marginal product of capital is the increase in
   A) capital needed to produce one more unit of output.
   B) output from a one-unit increase in capital.
   C) labor needed to accompany a one-unit increase in capital.
   D) output from a one-dollar increase in capital.
13) The fact that the production function relating output to capital becomes flatter as we move from left to right means that
   A) the marginal product of labor is positive.
   B) the marginal product of capital is positive.
   C) there is diminishing marginal productivity of labor.
   D) there is diminishing marginal productivity of capital.
   Answer: D
   Diff: 1
   Topic: Section 3.1
   Question Status: Previous Edition

14) The marginal product of labor
   A) is measured by the slope of the production function relating capital to employment.
   B) is larger when the labor supply is relatively larger.
   C) is smaller when the labor supply is relatively smaller.
   D) decreases as the number of workers already employed increases.
   Answer: D
   Diff: 1
   Topic: Section 3.1
   Question Status: Previous Edition

16) An adverse supply shock would
   A) shift the production function up and decrease marginal products at every level of employment.
   B) shift the production function down and decrease marginal products at every level of employment.
   C) shift the production function down and increase marginal products at every level of employment.
   D) shift the production function up and increase marginal products at every level of employment.
   Answer: B
   Diff: 1
   Topic: Section 3.1
   Question Status: Previous Edition

17) An invention that speeds up the Internet is an example of
   A) an income effect.
   B) an increase in labor.
   C) a substitution effect.
   D) a supply shock.
   Answer: D
   Diff: 1
   Topic: Section 3.1
   Question Status: Previous Edition

18) A supply shock that reduces total factor productivity directly affects which term in the production function $Y = AF(K, N)$?
   A) $A$
   B) $F$
   C) $K$
   D) $N$
   Answer: A
   Diff: 1
3.2 The Demand for Labor

1) Economists often treat the economy’s capital stock as fixed because
   A) labor is a more important factor of production than capital, so economists ignore capital.
   B) it takes a long time for new investment and the scrapping of old capital to affect the overall quantity of capital.
   C) there is very little capital in the economy compared with the amount of labor.
   D) unless the interest rate changes, the capital stock doesn’t change.
Answer: B
Diff: 1

3) An increase in the real wage rate will cause
   A) the labor demand curve to shift to the right.
   B) the labor demand curve to shift to the left.
   C) the quantity of labor demanded to rise.
   D) a movement along the labor demand curve.
Answer: D
Diff: 1

4) A decrease in the real wage would result in a
   A) movement along the labor demand curve, causing an increase in the number of workers hired by the firm.
   B) shift of the labor demand curve, causing an increase in the number of workers hired by the firm.
   C) movement along the labor demand curve, causing a decrease in the number of workers hired by the firm.
   D) shift of the labor demand curve, causing a decrease in the number of workers hired by the firm.
Answer: A
Diff: 1

7) What two factors should you equate in deciding how many workers to employ?
   A) The marginal product of labor and the marginal product of capital
   B) The marginal product of labor and the real wage rate
   C) The marginal product of labor and the real interest rate
   D) The marginal product of capital and the real wage rate
Answer: B
Diff: 1

8) One reason that firms hire labor at the point where \( w = MPN \) is
   A) if \( w < MPN \), the cost \( (w) \) of hiring additional workers exceeds the benefits \( (MPN) \) of hiring them, so they should hire fewer workers.
B) if \( w > MPN \), the cost \( (w) \) of hiring additional workers is less than the benefits \( (MPN) \) of hiring them, so they should hire more workers.

C) if \( w < MPN \), the cost \( (w) \) of hiring additional workers equals the benefits \( (MPN) \) of hiring them, so they have the right number of workers.

D) if \( w > MPN \), the cost \( (w) \) of hiring additional workers exceeds the benefits \( (MPN) \) of hiring them, so they should hire fewer workers.

Answer: D

Diff: 2

Topic: Section 3.2

Question Status: Previous Edition

9) Firms hire labor at the point where the
   A) nominal wage rate equals the marginal product of labor.
   B) real wage rate equals the marginal revenue product of labor.
   C) nominal wage rate equals the marginal revenue product of labor.
   D) real wage rate equals the marginal revenue product of capital.

Answer: C

Diff: 1

Topic: Section 3.2

Question Status: Previous Edition

10) The Upstart Company has the following production function.

<table>
<thead>
<tr>
<th>Number of Workers</th>
<th>Number of Cases Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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</tr>
<tr>
<td>1</td>
<td>10</td>
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<tr>
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<td>19</td>
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<tr>
<td>3</td>
<td>26</td>
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<tr>
<td>4</td>
<td>31</td>
</tr>
<tr>
<td>5</td>
<td>34</td>
</tr>
</tbody>
</table>

If the company hires 4 workers, which of the following could be the real wage rate?

A) 2
B) 5
C) 6
D) 8

Answer: B

Diff: 2

Topic: Section 3.2

Question Status: Previous Edition

12) Your boss wants to know if you should lay off any workers. You answer that you should lay off workers if the

A) marginal revenue product of labor is greater than the nominal wage rate.
B) marginal product of labor is greater than or equal to the real wage rate.
C) marginal revenue product of labor is equal to the nominal wage rate.
D) marginal product of labor is less than the real wage rate.

Answer: D

Diff: 1

Topic: Section 3.2

Question Status: Previous Edition
15) An adverse supply shock, such as a reduced supply of raw materials, would
   A) increase the marginal product of labor.
   B) decrease the marginal product of labor.
   C) decrease the marginal product of capital, but have no effect on the marginal product of labor.
   D) not affect the marginal product of labor.
   Answer: B
   Diff: 1
   Topic: Section 3.2
   Question Status: Previous Edition

3.3 The Supply of Labor

1) The aggregate supply of labor is the
   A) total amount of time a person works over his or her lifetime.
   B) total amount of time a person spends in the labor force over his or her lifetime.
   C) unemployment rate.
   D) sum of the labor supplied by everyone in the economy.
   Answer: D
   Diff: 1
   Topic: Section 3.3
   Question Status: Previous Edition

2) The tendency of workers to supply more labor in response to a larger reward for working is called the ________ of a higher real wage on the quantity of labor supplied.
   A) homogeneous labor supply effect
   B) negative correlation effect
   C) income effect
   D) substitution effect
   Answer: D
   Diff: 1
   Topic: Section 3.3
   Question Status: New

3) The income effect of a higher real wage on the quantity of labor supply is the
   A) idea that workers feel psychologically wealthier when wages are higher, so they work more.
   B) effect that income must rise when wages rise.
   C) tendency of workers to supply more labor in response to becoming wealthier.
   D) tendency of workers to supply less labor in response to becoming wealthier.
   Answer: D
   Diff: 1
   Topic: Section 3.3
   Question Status: New

4) If Jeff’s wage rate rises, he decides to work fewer hours. From this, we can infer that
   A) for Jeff, the substitution effect is greater than the income effect.
   B) for Jeff, the substitution effect is equal to the income effect.
   C) for Jeff, the substitution effect is less than the income effect.
   D) Jeff is a nitwit.
   Answer: C
   Diff: 2
   Topic: Section 3.3
   Question Status: Previous Edition
5) As a result of the superb economics essay that you wrote during this quarter, you won the Adam Smith prize of $100. The receipt of these funds would be an example of
   A) the substitution effect being stronger than the income effect.
   B) the income effect being stronger than the substitution effect.
   C) a pure income effect.
   D) a pure substitution effect.
Answer: C
Diff: 2
Topic: Section 3.3
Question Status: Previous Edition

6) A person is more likely to increase labor supply in response to an increase in the real wage, the _______ is the income effect and the _______ is the substitution effect.
   A) larger; larger
   B) larger; smaller
   C) smaller; larger
   D) smaller; smaller
Answer: C
Diff: 2
Topic: Section 3.3
Question Status: Previous Edition

7) A permanent increase in the real wage rate has a _______ income effect on labor supply than a temporary increase in the real wage, so labor supply is _______ with a permanent wage increase than for a temporary wage increase.
   A) larger; more
   B) larger; less
   C) smaller; more
   D) smaller; less
Answer: B
Diff: 2
Topic: Section 3.3
Question Status: Previous Edition

3.4 Labor Market Equilibrium

5) A tremendous flood along the Mississippi River destroys thousands of factories, reducing the nation's capital stock by 5%. What happens to current employment and the real wage rate?
   A) Both employment and the real wage rate would increase.
   B) Both employment and the real wage rate would decrease.
   C) Employment would increase and the real wage would decrease.
   D) Employment would decrease and the real wage would increase.
Answer: B
Diff: 2
Topic: Section 3.4
Question Status: Previous Edition

6) A sharp increase in stock prices makes people much wealthier. If the main effect of this increased wealth is felt on labor supply, what happens to current employment and the real wage rate?
   A) Both employment and the real wage rate would increase.
   B) Both employment and the real wage rate would decrease.
C) Employment would increase and the real wage would decrease.
D) Employment would decrease and the real wage would increase.
Answer: D
Diff: 2
Topic: Section 3.4
Question Status: Previous Edition

7) An adverse oil-price shock reduces labor demand. What happens to current employment and the real wage rate?
   A) Both employment and the real wage rate would increase.
   B) Both employment and the real wage rate would decrease.
   C) Employment would increase and the real wage would decrease.
   D) Employment would decrease and the real wage would increase.
Answer: B
Diff: 2
Topic: Section 3.4
Question Status: Previous Edition

9) The government announces a tax increase on workers’ wages to take effect in the future. What happens to current employment and the real wage rate?
   A) Both employment and the real wage rate would increase.
   B) Both employment and the real wage rate would decrease.
   C) Employment would increase and the real wage would decrease.
   D) Employment would decrease and the real wage would increase.
Answer: C
Diff: 2
Topic: Section 3.4
Question Status: New

10) The equilibrium level of employment, achieved after the complete adjustment of wages and prices, is known as the
   A) zero-unemployment level of employment.
   B) natural state.
   C) invisible handshake.
   D) full-employment level of employment.
Answer: D
Diff: 1
Topic: Section 3.4
Question Status: Previous Edition

3.5 Unemployment

3) The _______ is the number of unemployed divided by the labor force and the _______ is the number of employed divided by the adult population.
   A) unemployment rate; employment rate
   B) unemployment rate; employment ratio
   C) unemployment ratio; participation rate
   D) discouraged worker ratio; employment rate
Answer: B
10) Frictional unemployment arises when
   A) unskilled or low-skilled workers find it difficult to obtain desirable, long-term jobs.
   B) labor must be reallocated from industries that are shrinking to areas that are growing.
   C) workers must search for suitable jobs and firms must search for suitable workers.
   D) output and employment are below full-employment levels.
   Answer: C

11) Cyclical unemployment arises when
   A) unskilled or low-skilled workers find it difficult to obtain desirable, long-term jobs.
   B) labor must be reallocated from industries that are shrinking to areas that are growing.
   C) workers must search for suitable jobs and firms must search for suitable workers.
   D) output and employment are below full-employment levels.
   Answer: D

12) Cyclical unemployment is caused by
   A) people entering the labor force to search for jobs.
   B) technological progress, which causes some industries to expand employment and others to reduce employment.
   C) reducing international trade barriers, which causes some industries to expand employment and others to reduce employment.
   D) business cycle fluctuations
   Answer: D

3.6 Relating Output and Unemployment: Okun’s Law

1) According to Okun’s law, an increase in the unemployment rate will cause ________ in the level of employment and ________ in the level of output.
   A) an increase; an increase
   B) an increase; a decrease
   C) a decrease; an increase
   D) a decrease; a decrease
   Answer: D